

Peer reviewed Journal

Impact Factor: 7.265

ISSN-2230-9578

Journal of Research and Development

A Multidisciplinary International Level Referred Journal

November 2022 Volume-14 Issue-19

Chief Editor

Dr. R. V. Bhole

*'Ravichandram' Survey No-101/1, Plot
No-23, Mundada Nagar, Jalgaon (M.S.)*



Address

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Utility of Google classroom application: Views of Students teacher

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DOI- 10.5281/zenodo.7430918

Abstract

Google Classroom is a free application designed help students and teachers communicate, collaborate, organize, and manage assignments go paperless and much more. This guide is chocked full of step-by-step instructions for using Google classroom, setting up classes, creating announcements, discussions, assignments and assignment management tips. Google classroom also find helpful screenshots of both side the teacher and student. This paper is an effort broader idea of perception of benefits and usage Google classroom application in school of distance education in Bharathiar University. Normative survey design was employed in the present study to response the research items. This study was carried out in school of distance education, Bharathiar University, Coimbatore. There was a total 35 student teachers who provided data for the study. The findings of the present study revealed that the mean of school of distance education student's teacher using average of Google classroom application.

Key words: Google classroom, Student teachers, Utility, Normative survey design.

Introduction

The COVID-19 has affected not only the economy, and social life, but also academia. In an attempt to mitigate infection from COVID-19, many colleges around the world, including those in India, have been forced to conduct classes online. Technology, as it is used in the field of education, has aided in the development of the learning process. It has made it possible to access knowledge more easily and has even helped students learn the skills needed in their careers. The development of a learning model that allows students to acquire knowledge and at the same time provide student-to-student interaction is urgently required. Due to the sudden changes brought about by the pandemic, the education system has had to deal with many difficulties.

Need and significant of the study

Technology is an integral part of the young generation. The widespread use of technology has generated interested in many researchers and academicians to explore the ways teachers can use that technology prowess to enhance the learning of students. This research will enable students to increase level of communication between teachers and students. It will also enable students learn more effectively and enable them to complete assignment quickly.

Objectives of the study

To study views of school of distance education student's teacher regarding usefulness of Google classroom application.

Hypotheses of the study

There is no significant difference between in means score of utility of Google classroom application with respect to their

1. Male / Female (Gender)
2. Rural / Urban (Locality)
3. Arts / Science (Course)
4. UG / PG (Educational Qualification)
5. Tamil / English (Medium of Instruction)
6. Joint / Nuclear (Type of family)
7. Married / Unmarried (Marital Status)

Review of Related Literature

Gupta and Pooja (2021) conducted to study the impact of Google classroom as a platform of learning and collaboration as the teacher education level. Studies were focused on techno-stress scale of teacher educators: construction of the tool. It is useful to measure teacher educators' stress while using technology in their teaching and learning process. It can be utilized and extended for further research in the same field (Thiyagu, 2021). Muhammad (2019) found students felt the ease and improvement of the quality of the blended lectures using Google Classroom, although several notes needed further improvement and evaluation.

Suhapawati (2020) did research on Google classroom can be obtained through the Play Store application found on an Android phone can be used as a problem in other studies so that information obtained comprehensively about lectures using Google Classroom.(Jaya, 2019)conducted research on Google classroom

for mobile learning in higher education: Modelling the initial perceptions of students.

Research Methodology

Population of the study

In this study, the entire student's teacher who is pursuing B.Ed., (Bachelor of Education) at school of distance education in Bharathiar University, Coimbatore has been taken as the population for the study. The student teachers had taken as the population particularly in the Coimbatore district.

Sample selected for the study

Simple random sampling method was adopted to choose the sample in the present study. 35 student teachers were selected as the sample from School of distance education, Bharathiar University, Coimbatore.

Tools for the present study

Each scale item has 5 response categories ranging from strongly agree, agree, neutral, disagree, strongly disagree. It is a five-point scale ranging from the value 1 to 5.

Utility	Number of items	Cronbach's alpha
Google classroom application	25	0.756

From the above table shown that the Cronbach's alpha is 0.756, which indicates an

average level of internal consistency of the tool.

Data Analysis

Table 1

There is no significant difference in means score of utility of Google classroom application with respect to gender

Gender	N	Mean	Std	t - value	Remarks
Male	8	158.13	42.589	1.597	Not Significant
Female	27	190.96	72.807		

In the above table-1 shows that, the calculated 't' value is 1.597 is lesser than the table value 1.96 at 0.05 significant level. Hence, the null hypothesis is accepted. Therefore, it is interpreted that, there is no

significant between male and female of utility of Google classroom application with respect to their gender. From the observed mean score of male have low utility of Google classroom than female of student teachers.

Table 2

There is no significant difference in means score of utility of google classroom application with respect to locality.

Locality	N	Mean	Std	t - value	Remarks
Rural	15	191.33	72.190	0.588	Not Significant
Urban	20	177.55	65.929		

In the above table-2 shows that, the calculated 't' value is 0.588 is lesser than the table value 1.96 at 0.05 significant level. Hence, the null hypothesis is accepted. Therefore, it is interpreted that, there is no

significant between rural and urban of utility of Google classroom application with respect to their locality. From the observed mean score of rural have high utility of Google classroom than urban of student's teacher.

Table 3

There is no significant difference in means score of utility of Google classroom application with respect to course.

Course	N	Mean	Std	t - value	Remarks
Arts	15	182.40	67.834	0.079	Not Significant
Science	20	184.52	69.859		

In the above table-3 shows that, the calculated 't' value is 0.079 is lesser than the table value 1.96 at 0.05 significant level. Hence, the null hypothesis is accepted. Therefore, it is interpreted that, there is no

significant between arts and science of utility of Google classroom application with respect to their course. From the observed mean score of arts have average utility of Google classroom than science of student's teacher.

Table 4

There is no significant difference in means score of utility of Google classroom application with respect to educational qualification.

Educational Qualification	N	Mean	Std	t - value	Remarks
UG	14	178.86	69.302	0.322	Not Significant
PG	21	186.52	68.646		

In the above table-4 shows that, the calculated 't' value is 0.322 is lesser than the table value 1.96 at 0.05 significant level. Hence, the null hypothesis is accepted. Therefore, it is interpreted that, there is no significant between ug and pg of utility of

Google classroom application with respect to their educational qualification. From the observed mean score of ug have average utility of Google classroom than pg of student's teacher.

Table 5

There is no significant difference in means score of utility of Google classroom application with respect to medium of instruction.

Medium of Instruction	N	Mean	Std	t - value	Remarks
Tamil	15	186.67	73.037	0.238	Not Significant
English	20	181.05	65.784		

In the above table-5 shows that, the calculated 't' value is 0.238 is lesser than the table value 1.96 at 0.05 significant level. Hence, the null hypothesis is accepted. Therefore, it is interpreted that, there is no significant between Tamil and English of

utility of Google classroom application with respect to their medium of instruction. From the observed mean score of Tamil have high utility of Google classroom than English of student's teacher.

Table 6

There is no significant difference in means score of utility of Google classroom application with respect to type of family.

Type of family	N	Mean	Std	t - value	Remarks
Joint	13	180.85	66.872	0.174	Not Significant
Nuclear	22	185.00	70.160		

In the above table-6 shows that, the calculated 't' value is 0.147 is lesser than the table value 1.96 at 0.05 significant level. Hence, the null hypothesis is accepted. Therefore, it is interpreted that, there is no significant between joint and nuclear of

utility of Google classroom application with respect to their type of family. From the observed mean score of joint have average utility of Google classroom than nuclear of student's teacher.

Table 7

There is no significant difference in means score of utility of Google classroom application with respect to marital status.

Marital status	N	Mean	Std	t - value	Remarks
Married	31	189.77	69.606	3.570	Significant
Unmarried	4	134.50	18.267		

In the above table-7 shows that, the calculated 't' value is 3.570 is greater than the table value 1.96 at 0.05 significant level. Hence, the null hypothesis is rejected. Therefore, it is interpreted that, there is

significant between married and unmarried of utility of Google classroom application with respect to their marital status. From the observed mean score of arts have low utility

of Google classroom than science of student's teach

Findings

There is no significant between male and female of utility of Google classroom application with respect to their gender, course, and educational qualification. From the observed mean score of male have low utility of Google classroom than female of student teachers.

There is significant between married and unmarried of utility of Google classroom application with respect to their marital status. From the observed mean score of arts have low utility of Google classroom than science of student teachers.

Conclusion

Google classroom application offers several benefits; increases instructor leverage, student throughput, student mastery, student engagement, offer students opportunity to learn key disciplines, facilitate coaching of concepts and tools, and serve as bridging courses, the concerns are raised, as many aspects of traditional classes do not work in a Google classroom application such as small group discussion and face to face time with instructors. However, instructional design can play an important role in effective online pedagogies involving interactive activities and engaging discussions in Google classroom application. Student-cantered activities can also lead to a better engagement.

References

1. Adit Gupta, & Pooja Pathania. (2021). To study the impact of google classroom as a platform of learning and collaboration as the teacher education level. *Education and Information Technologies*, 2(6), 843-857. <https://doi.org/10.1007/s10639-020-10294>
2. Almio Susetyo Harjanto, & Sri Sumarni, (2019). Teachers experiences on the use of google classroom. *English Language & Literature International Conference Proceedings*, (ELLIC), 3(2), 172-178. <https://jurnal.unimus.ac.id/index.php/ELLIC/article/view/4704>.
3. Andri Wijaya. (2016). Analysis of factors affecting the use of google classroom to support lectures. *International Conference on Information Technology*

and Engineering Application Palembang-Indonesia, 61-

68. <http://eprints.binadarma.ac.id/id/eprint/2777>.

4. Annafi Annanda Oktaria, & Laksmi Rohmayadevi. (2021). Students' perceptions of using google classroom during the covid - 19 pandemics. *International Journal of Educational Management and Innovation*, 2(2), 153-163. DOI: 10.12928
5. Izwan Nizal Mohd Shaharane, Jastini Mohd, & Syamimi Mohamad Rodzi. (2016). The application of google classroom as a tool for teaching and learning. *Journal of Telecommunication, Electronic and Computer Engineering*, 8(10), 5-8. <https://core.ac.uk/download/pdf/78487287.pdf>
6. Jeya Amantha Kumar, & Brandford Bervell. (2019). Google classroom for mobile learning in higher education: Modelling the initial perceptions of students. *Education and Information Technologies*, 2(4), 1793-1817, <https://doi.org/10.1007/s10639-018-09858->
7. Sadequle Islam, Md., (2019). Bangaladeshi university students' perception about using google classroom for teaching English. *International Journal of Psycho-Educational Sciences (IJPES)*, 8(2), 57-65. <https://orcid.org/0000-0002-1431-0486>.
8. Muhammad Luthfi, Wibowo Heru Prasetyo, & Jan Wantoro. (2019). Pre-service student teachers' perception of using google classroom a blended course. *Gyandhara International Academic Publication (GIAP)*, 7(2), 363-368. <https://doi.org/10.18510/hssr.2019.7242>
9. Thiyagu, K. (2021). Techno-stress scale of teacher educators: Construction of the tool. *International Journal of Recent Technology and Engineering*, 9(5), 114-117. <https://doi.org/10.35940/ijrte.E5189.019521>

Third Space Perception And Cultural Hybridization In Jhumpa Lahiri's *The Namesake*

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DOI- 10.5281/zenodo.7430936

Abstract

Diaspora studies deals with the changing patterns in human psychology due to the shift in geographical location, migration, change in culture and ethnicity. The diasporic women writers expose their experiences of dislocation through their narratives.. Jhumpa Lahiri, an Indian immigrant from West Bengal deals with the lives of Indian immigrants in America. Her first novel *The Namesake* portrays the first generation immigrant's issues and the difficulties faced by their children in the two conflicting cultures. She presents the complex human mind of the characters, their emotions and behaviours in real life. She depicts the nostalgic life style of the complex urban and their transformation through their life experiences. This paper attempts to focus on the alienation of the immigrants presented by the writer in the novel *The Namesake* in the third space and their transformation for assimilation in the new land with hybrid identity.

Key words: psychology, migration, dislocation, immigrant, assimilation

Introduction

Jhumpa Lahiri has been born in London to Bengali immigrant parents. She has published the novel *The Namesake* in the year 2003, which portrays her experiences in assimilation to America. She presents the protagonist Gogol Ganguli, the second generation immigrant faces the loss of identity because of his name change while admitting in the school. The author has experienced the same as her name has been changed when she started her school. Her parents have planned to name her Nilanjana or Sudeshna, but her teacher has preferred her pet name Jhumpa as the other names are too long to pronounce. The displacement from the homeland and the home culture makes the diasporic writers to venture their character's alienation, existential restlessness, nostalgia and quest of identity. The writer deals with the hardship of Ganguly parents and their children in their adaption to the American society. Homi k. Bhabha, a literary theorist presents the concept of hybrid identity and third space through the cultural change in the multicultural land. The hybrid identity arises from the relationship between different cultures. The immigrants when they try to assimilate in the new land are unable to follow the culture of their home land and host land, which give rise to new cultural identities. The 'Third space' refers to the in-between space that is formed by the communication of two colliding cultures. Collective memory regarding the homeland arises due to the alienation in the new

country. At third space cultural transformations takes place which enable cultural hybridity, a transcultural form. Homi.K.Bhabha comments in *The Location of Culture*, " These in-between spaces provide the terrain for elaborating strategies of selfhood-singular or communal-that initiate new signs of identity, and innovative sites of collaboration and contestation, in the act of defining the idea of society itself"(2).

Ashima the obedient daughter of her parents is graduated from Calcutta University in English literature. She is brought up in a Bengali traditional family and her parents arrange her marriage with Ashoke, an engineering student doing research at the Massachusetts Institute of Technology. She arrives to USA with her husband Ashoke, distantly from her parents. Ashima is homesick and lives alone in their three room apartment missing so many loving ones of the native lands. She feels aloofness in the new land. The immigrants in the third space recall the memories of their homeland. She delivers her first child alone in America. She recalls India where women go to their parent's home and they are taken care for the arrival of the new baby. Vijay Agnew remarks this in *Diaspora Memory and Identity: A Search for Identity*,

The individual living in the diaspora experiences a dynamic tension everyday between 'here' and remembering 'there', between memories of places of origins and entanglements with places of residence, and between the metaphorical and physical home.(19)

Living in Cambridge “She is terrified to raise a child in a country where she is related to no one, where she knows so little, where life seems tentative and spare” (6). She is alienated in the new land without the support of her family members. So when she returns from the hospital she says to her husband, “I don’t want to raise Gogol alone in this country. It’s not right. I want to go back”(35). Her nostalgia makes her to connect with her homeland. The only solace to her was to read *Desh* magazine. “The printed pages of Bengali type, slightly rough the touch, are a perpetual comfort to her” (6). The writer focuses on the cultural dislocation of the immigrants. Traditional values bring people together and they are part of one’s identity. Families give importance to maintain tradition. Ashima also tries to fix in her roots. Her grandmother has not admonished Ashima like her parents or other relatives, “not to eat beef or wear skirts or cut off her hair or forget her family the moment she landed in Boston” (37). She is the only person, who predicts that “Ashima would never change” (37). Ashima is depressed during her initial stay in the foreign land. Ashima is reluctant and feels lonely as her relatives are not with her. She tries to assimilate in the new land and finds a job as librarian and creates contact with the outside world. Her mingling with the American colleagues makes her confident. She realizes: Now that there is no one to feed or entertain or talk to for weeks at a time. At forty- eight she has come to experience the solitude that her husband and son and daughter already know, and which they claim not to mind. “It is not such a big deal,” her children tell her. “Everyone should live on their own at some point.” But Ashima feels too old to learn such a skill. (161) The search for identity is one of the issues of the diasporic people. All the characters in the novel *The Namesake* struggle for identity. Ashima compromises between two different cultures and has ventured an identity which belongs neither to her homeland nor to the host land. Her metamorphosis makes her to create a mixed identity. Iqbal Mahmood in his work *Strategies of Negation: Postcolonial Themes and conflicts in the English Language Literature of the East Indian Diaspora* points out the problem of identity in women:

Uncertainty gives rise to convenient manipulation of portrayals of self-identity, crafted to fit the immediate situations. The temporality of identity in the context of situations self-imposed upon the individual in an attempt to alleviate the feeling of not belonging is a strategy of negation, a strategy of compromise, which allows a new immigrant to the western world to find some degree of acceptance, albeit minimal, a sense of validation, to continue living in a marginalized status. (38)

At the end of the novel Ashima transforms successfully from the difficult situations she faced in her life. She is able to accustom in the hostland even after the death of Ashoke. It is an unacceptable change in her as she is a typical Indian wife willingly dependent on her husband. She even refuses to utter the name of her husband and does not change her dress code of wearing saree. She lives as an Indian woman devoted to her husband and children accepting all the sufferings in her life. Her transformation shows her acceptance of the American life style of both children. Her motherly affection throughout their growing up stage shows her roots fixed in the native culture. Her life is decided with the well beings of her family members. Ashima has learnt everything in her life either by her husband, parents or even children be it driving a car, or celebrating Christmas with all ritualistic fun. “I did not know a thing back then” (285). Finally she decides herself to move to Calcutta for six months and remaining six months with her children in America. Her homelessness is exhibited by the writer, “True to the meaning of her name, she will be without borders, without a home of her own, a resident everywhere and nowhere” (276). Homi.K.Bhabha reflects in *The Location of Culture*, “The borderline works of culture demands an encounter with ‘newness’ that is not part of the continuum of past and present. It creates a sense of the new as an insurgent act of cultural translation” (7). Ashoke , an Indian young man is involved in a train accident in 1961. His meeting with the stranger in the train is short as the man died in the accident within a few hours but the suggestion given to him makes him to continue his studies abroad. “He imagined not only walking, but walking away, as for as he could from the place in which he was born and in which he had nearly died” (20). He

marries Ashima, the Bengali girl and at home he continues to be the traditional Indian male, meticulous about his clothing and food. Ashoke though assimilated in American life also recalls the memories of life in India. His consciousness while Ashima is in hospital giving birth to the child is expressed by the writer, "Although it is Ashima who carries the child, he, too, feels heavy with the thought of life, of his life and the life about to come from it"(21). Ashoke, like his wife, recollects his past in India which plays a vital role as an immigrant. He embraces the fatal train accident and feels, "He was born twice in India, and then a third time in America" (21). Ashoke suggests the name Gogol to his son, in honour of the famous Russian author. He is reading that book while he met the accident, "He remembers the page crumpled tightly in his fingers, the sudden shock of the lantern's glare in his eyes" (18). Homi.K.Bhabha depicts in *The Location of Culture*, "Remembering is never a quite act of introspection or retrospection. It is painful remembering, pulling together of the disembodied past to make sense of the present" (63). The couples try to fix their roots by preparing Indian food, inviting Bengali families for rituals and having friendship with them. At the same time they cook American style of baking chicken or preparing burgers etc. They want to follow the native culture and pass it on to their children. Gogol and Sonia grow in hybrid culture, part Bengali and part American. They often visit Calcutta to have relationship with their relatives sacrificing their comforts in America. Ashima talks to Gogol about the importance of Durga Pooja and also insists him to memorize four lines children's poem by Tagore. At the same time she trains her child to watch 'Sesame Street' and the 'Electric Company' in order to compete with the Americans at school.

The second generation immigrants struggle to create their identity and culture. As they are born in America they try to assimilate in the American culture. But they are not accepted by the Americans. In this novel Gogol, Sonia and Moushimi face the second generation problems in their life. They decide to choose their own career. They act against the wish of their parents. Gogol's parents want him to pursue Engineering degree but he decides to study architecture.

Moushimi's parents wish her to be a chemist but she plans to study French. Sonia studies law. Moushimi hates to marry a Bengali boy according to the wish of her parents. She flirts with her fellow students as an act of vengeance to her parents. She breaks her life with Gogol and maintains her relationship with Dimitri. Sonia decides to marry Ben who is half Chinese and half Jewish.

Gogol struggles with the name given by his father at his birth. At school his parents planned to change the name as Nikhil, but Gogol does not accept the new name. But later his name becomes a problem for Gogol, because he feels he lost the identity with the Russian name. It makes him to detach himself from both the heritage, India and America. Gogol decides to use his legal name, Nikhil, and the name brings him more confidence and independent identity. He practices the western life style as a teenager and falls in love with Maxine, an American. He admires the freedom given to her by her parents. After the death of his father he breaks his relationship with Maxine. He marries Moushimi his childhood friend, a second generation immigrant. She wishes to lead the American life style. Gogol's relationship with Moushimi also ends because she has an affair with Dimitri. He decides to start a new job. The author exposes his agony when his mother plans to spend six month in Calcutta leaving him to lead an independent life., "Without people in the world to call him Gogol, no matter how long he himself lives, Gogol Ganguly will, Once and for all, vanish from lips of loved ones. And so, cease to exist. Yet his eventual demise provides no sense of victory, no solace, it provides no solace at all" (289).

Conclusion

The problem arises in the construction of cultural identity for the settlers in the United States. Ashima's metamorphosis from a nineteen years Bengali girl to a self-dependent woman is clearly portrayed by the writer in the novel. She overcomes all the obstacles in her life and achieves the meaning of her name Ashima, the limitless. Gogol straddles between two cultures India and America. Even though his parents insist the root culture he avoids Indian heritage. He returns to the family after his failure in relationship with Ruth, Maxine and Moushimi. Finally he realizes that he should not abandon one culture for the other and his

identity arises from both the culture, a hybrid identity. Sonia's marriage with Ben is accepted by the family members. Jhumpa Lahiri's novel *The Namesake* explores the third space perception and the creation of hybrid identity of the immigrant characters.

Works Cited

1. Agnew, Vijay. *Diaspora Memory and Identity: A Search for Identity*. University of Toronto Press, 2005.
2. Bhabha, Homi.K. *The Location of Culture*. New York, 2005.
3. Lahiri, Jhumpa. *The Namesake*. Harper Collins, 2003.
4. Mahmood, Iqbal. *Strategies of Negation: Postcolonial Themes and conflicts in the English*
5. *Language Literature of the East Indian Diaspora*. Authorhouse, 2006

Availability of Water and Socio-Economic Development: A Comparative Study of Pune and Aurangabad Divisions of Maharashtra State

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Abstract:

Water is required for all human activities and the survival of human beings cannot be imagined without water. With the growing population and depletion of the naturally available usable water, the problem of water is set to be aggravated with time. As socioeconomic development depends directly and indirectly upon the availability of water, the present paper studies the availability of water and the socio-economic development of two regions of the Maharashtra state namely Pune and Aurangabad.

Introduction:

The development of the human race is always dependent on water as is evident from history. All the civilizations are developed along the banks of major rivers in the world. Water is required for nearly all human activities and the survival of human beings cannot be imagined without the availability of water. India is the second largest populated country in the world and is estimated to be the first till the end of the current decade. This growing population needs more water to satisfy its needs. By the year 2025, India is expected to use 105 mham annually; up from 38 mham annually in 1974 (Nag, 1975). The problems related to the availability and accessibility of water is faced by all the countries in the world. About 80 countries comprising 40% of the world's population already suffer from serious water shortages (Ashok Nigam, 1998) and the problem is projected to become severe with time. Projected estimates indicate a huge demand-supply gap of water in all the major river basins by 2030 (GoM, 1999). The problem in India is more serious. Nearly 44 million people in India are affected by water quality problems either due to pollution, the prevalence of fluoride, arsenic, and iron deposits in groundwater, or due to the Ingress of seawater into groundwater aquifers (Ashok Nigam, 1998). The available water is also not up to the quality standards required for human consumption. 30 percent of urban at 90% of rural households still depend on untreated surface or groundwater (Srikanth, 2009). Nonavailability of quality water for consumption results in health and economic losses. 37.7 million Indians are affected by waterborne diseases annually, 1.5 million children are estimated to die because

of diarrhea control and 73 million working days are lost due to waterborne diseases each year. the resulting economic burden is estimated at 600 million US dollars a year (Srikanth, 2009).

The availability and accessibility to water and irrigation facilities are also uneven in different parts of the country. The dimensions of inequality analysed include: inequality in access to common pool groundwater resources (both inter-generational and intra-generational inequality); inequality caused by monopolistic groundwater markets; inequality in access to common property water from river catchments; inequality in access to subsidized water from public irrigation schemes; and inequality in access to water from municipal water supply systems (Kumar & R. Maria Saleth, 2018).

The present paper is analytical in nature and tries to explore the situation of water availability and its effects on the socio-economic development of two regions of the state of Maharashtra namely Pune and Aurangabad. Secondary data collected from various sources is used for the analysis. The parameters used for the study are the availability of irrigation facilities, the incidence of poverty, HDI, District Total product, and district Per Capita Income.

Objectives:

1. To study the availability of irrigation facilities in the Pune and Aurangabad Regions
2. To study the incidence of poverty in the Pune and Aurangabad Regions
3. To study the socio-economic development of the Pune and Aurangabad Regions

Availability of water and irrigation facilities

Availability and accessibility to water play a major role in determining the standard of living of the people in the country. In India rainfall is the primary source of water for all the regions. The rainfall in India is uneven as some parts of the country receive heavy

rainfall and some are facing droughts continuously due to less rainfall. In Maharashtra, Aurangabad is the region that receives less rainfall compared to other regions over the many years.

Table no 1: Normal and Actual rainfall

Year	Pune		Aurangabad	
	Normal Rain (mm)	Actual Rain (mm)	Normal Rain (mm)	Actual Rain (mm)
2011	1122	1162.2	800.3	704.2
2013	1122	924.1	800.3	1010.6
2014	1122	923.7	800.3	556.4
2015	1122	639.3	800.3	605
2016	1122	896	800.3	903.5
2017	1122	916.8	800.3	677.2
2019	1122	1352.7	800.3	845.4
2020	1122	1141.5	800.3	951.1

Source: Data Collected from the District Economic Surveys

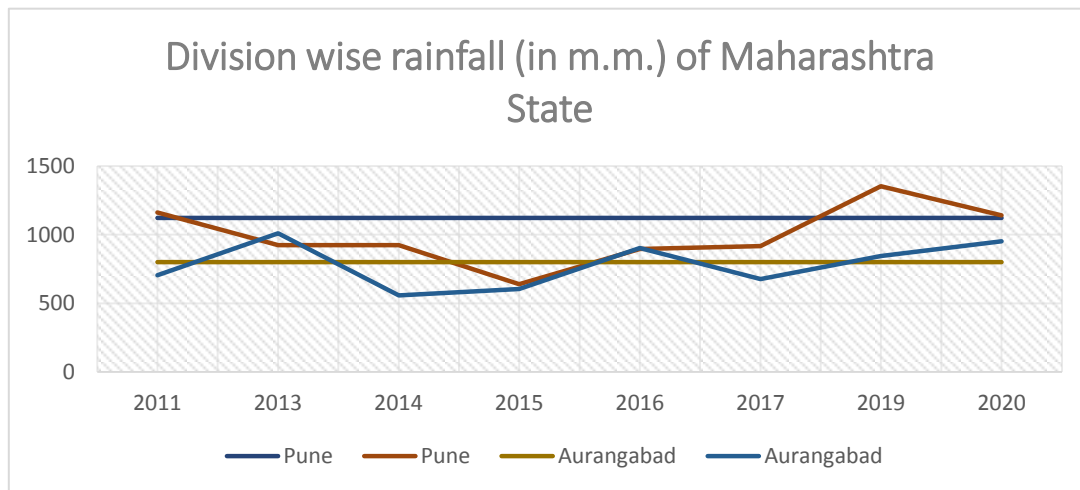


Chart 1: Division-wise rainfall (in m.m.) of Maharashtra state

Table 1 and chart 1 show the comparison of average and actual rainfall between the Pune and Aurangabad Regions of the state of Maharashtra for the duration of 2011-2019. The average annual rainfall of the Pune region is 1122 mm and the average rainfall of the Aurangabad region is 800.3 mm which is considerably less compared to the Pune region. Except 2013 and 2016, the actual rainfall in the Pune region is consistently greater than in the Aurangabad region. This fact makes it clear that the availability of water is less in the Aurangabad region compared to Pune.

Access to water depends upon water management. Some parts of the world which receive very less rainfall have successfully managed the available water for their needs. Irrigation facilities play a dominant role in determining access to water. The major and medium storage system of surface irrigation has a crucial role to play in water-scarce, drought-prone, seasonal rivers, flowing regions like Marathwada. These systems are expected to provide sufficient water supply to sustain the expected current level of agricultural development (Mitra, 1998).

Sr. No.	Particulars	Regions	
		Aurangabad	Pune
1	Number of Districts	8	5
2	Number of Large Projects	17	36
3	Average no. of large projects per districts	2.12	7.2
4	Medium Projects	82	52
5	Small Projects (State)	799	391
6	Small Projects (Other)	2609	4157
7	Percolation Dams	9276	5500
8	Kolhapuri Dams	3399	3033
9	Storage Dams	4775	4727
10	Upasa Jal Sinchan Yojana	68	167
11	Wells	190378	218414
12	Diesel Pumps	9460	4722
13	Electric Pumps	877056	1216431
Source: Data Collected from District Economic Surveys 2020			

Incidence of Poverty

Poverty is defined as a situation where people are unable to fulfill their basic needs such as food, cloth, shelter, health, and education. Government of India has formed various committees for the calculation of poverty line and measurement of incidence of poverty in the country. According to Tendulkar Committee estimates, "The percentage of persons below the Poverty Line

in 2011-12 has been estimated as 25.7% in rural areas, 13.7% in urban areas and 21.9% for the country as a whole. The respective ratios for the rural and urban areas were 41.8% and 25.7% and 37.2% for the country as a whole in 2004-05. It was 50.1% in rural areas, 31.8% in urban areas and 45.3% for the country as a whole in 1993-94. (Poverty Estimates for 2011-12, 2013)"

	Poverty Ratio			Number of Poor (in millions)		
	Rural	Urban	Total	Rural	Urban	Total
1993-94	50.1	31.8	45.3	328.6	74.5	403.7
2004-05	41.8	25.7	37.2	326.3	80.8	407.1
2011-12	25.7	13.7	21.9	216.5	52.8	269.3
Source: https://niti.gov.in/planningcommission.gov.in/docs/news/pre_pov2307.pdf						

In Maharashtra, the incidence of poverty varies in different parts of the state. For the two regions chosen for study, there is a difference in the incidence of poverty. As is evident from table no. 4 and chart 2, in Aurangabad Region, 28.99 percent of households are living below poverty line in rural areas whereas 33.28 percent of households are below poverty line in the

urban area. The same numbers for the Pune region are 19.76 percent for rural areas and 20.5 for urban areas. The comparison between the two regions shows that in the Aurangabad region the incidence of poverty in rural areas is more by 9.23 percentage points and in urban areas, it is more by 13.23 percentage points.

Table no. 4: Percentage of Households Below the Poverty line (Rural and Urban)

Regions	District	Percentage of Households (Rural) BPL	Percentage of Households (Urban) BPL
Aurangabad	Aurangabad	28.7	7.26
	Latur	29.81	26.05
	Osmanabad	32.82	34.76
	Parbhani	30.46	34.68
	Nanded	10.45	33.21
	Beed	26.85	33.81

	Jalna	38.35	38.86
	Hingoli	34.53	57.62
Aurangabad Total		28.99	33.28
Pune	Pune	19.5	1.4
	Satara	15.97	26.32
	Solapur	29.31	24.19
	Sangli	16.6	NA
	Kolhapur	17.6	28.3
Pune Total		19.76	20.05
Source: Data collected from District Economic Surveys of 2020			

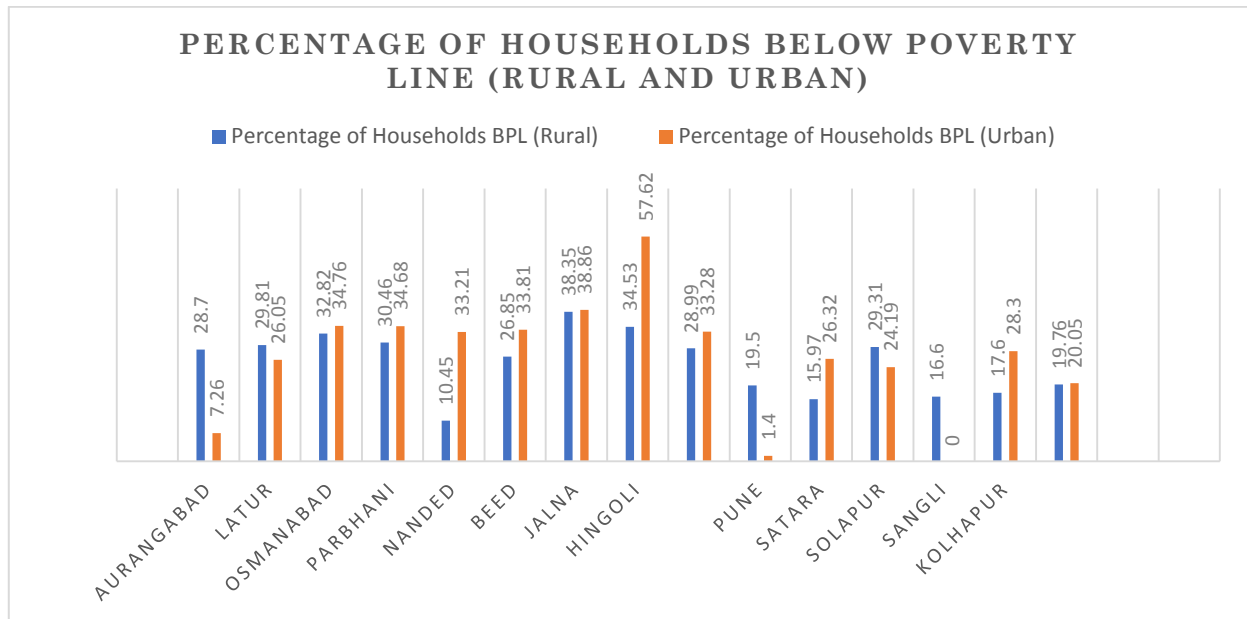


Chart 2: Percentage of Households Below Poverty Line (Rural and Urban)

Socio-Economic Development

District Total Product and Per Capita Income

The Socio-Economic Development of the country is measured in terms of various parameters such as Domestic Product, Per Capita Income, HDI value, etc. India is currently the 5th largest economy in the world with a size of more than 3 trillion dollars, but According to the International Monetary Fund (IMF), on a per capita income basis, India ranked 142nd by GDP (nominal) and 125th by GDP (PPP) in 2022.

In India, Maharashtra ranks 1st in terms of GDP and 9th in terms of GDP Per capita. It is one of the most industrialized states in the

country and contributes about 20% of the national industrial output. But there exist wide inequalities in terms of District Total Product and Per Capita Income between different districts in Maharashtra. An examination of the regional profile indicates that all the districts of western Maharashtra with the exception of Dhule were classified as belonging to medium and high levels of development. In sharp contrast, all the districts in Marathwada, except Aurangabad, and six out of nine districts in Vidarbha were classified as belonging to the category of the underdeveloped district (Prabhu & Serker, 1992)

Table no. 5: District Total Product and Per Capita Income			
Stable prices 2011-12			
Regions	District	Net Total Product (in crores)	Net PCI (in rupees)
Aurangabad Region	Aurangabad	21423	62046
	Latur	9959	41314
	Osmanabad	6341	37419
	Parbhani	6861	38120
	Nanded	NA	38120
	Beed	8709	35185

	Jalna	7245	39125
	Hingoli	3173	28196
Aurangabad (Average)		9101	39940
Pune Region	Pune	91241	101687
	Satara	80559	54178
	Solapur	23725	52305
	Sangli	31070	103588
	Kolhapur	29789	72917
Pune (Average)		51276	76935
Source: Data Collected from District Economic Surveys of 2020			

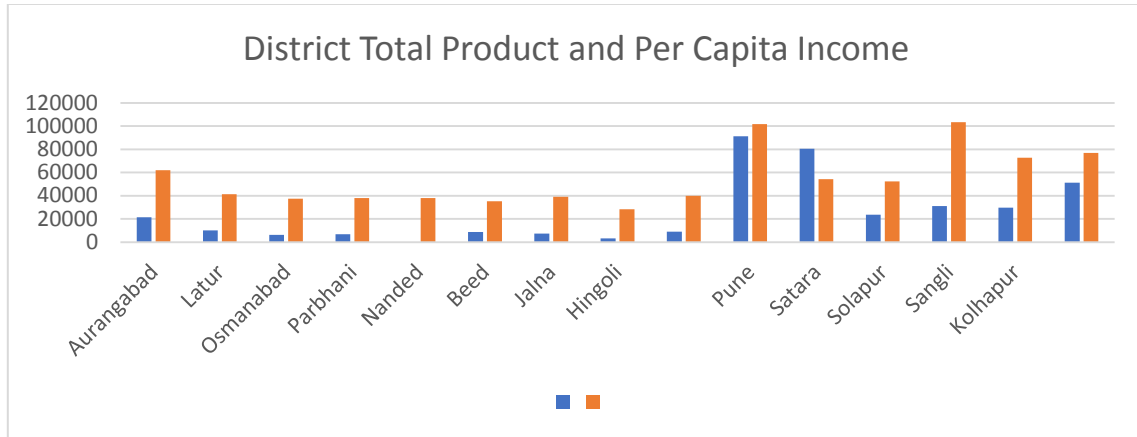


Chart 3: District Total Product and Per Capita Income

Table 5 and Chart 3 shows the District's Total Product and Per Capita Income for the year 2020 at stable prices of 2011-12. The average Net Total Product in Aurangabad Region is 9101 crores whereas in the Pune region it is 51276 crores which shows a huge gap in the total income of the Pune and Aurangabad regions. The same is the situation in the case of Per Capita Income (PCI). Net Per Capita Income in Aurangabad Region is 39940 Rupees and in the Pune region, it is 76935 rupees which are almost double that of the Aurangabad Region. There are variations among different districts in terms of District Total Product and PCI. In Aurangabad District, the Total Product Stands highest at 21423

crores and it is the lowest for Hingoli i.e. 3173 crores only. In the Pune region, the District Total Product is higher for Pune district i.e. 91241 crores, and lowest for Solapur District 23725 crores.

Human Development Index 2011

The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions. HDI is used worldwide to measure the standard of living of households in different countries in the world.

Sr. No.	District	HDI Value 2011	Category
Aurangabad Region	Aurangabad	0.727	High
	Latur	0.663	Low
	Osmanabad	0.649	Low
	Parbhani	0.683	Medium
	Nanded	0.657	Low
	Beed	0.678	Medium
	Jalna	0.663	Low
	Hingoli	0.648	Low
Pune Region	Pune	0.814	Very High
	Satara	0.742	High
	Solapur	0.728	High
	Sangli	0.742	Very High
	Kolhapur	0.770	Very High

Source: https://mahasdb.maharashtra.gov.in/docs/pdf/mhdr_2012.pdf

India Ranks at 132nd position out of 191 countries in the world in terms of HDI. Human Development within different states and districts is uneven in India. Table no. 6 makes it clear that in the Aurangabad region out of 8 districts only one district i.e. Aurangabad stands in the category of High Human Development and five districts namely Latur, Osmanabad, Nanded, Jalna, and Hingoli stand in the 'Low' human development category. In the Pune region three districts namely Pune, Sangli and Kolhapur stand in the 'Very High' category of HDI and two districts stand in the 'High' HDI category, there is no district categorized as low or very low HDI.

Findings and Conclusion

It is observed that the availability and accessibility of water and development are closely related to each other. The study finds that the regions having higher rainfall and irrigation and other water supply facilities are far better in socio-economic and human development. Pune region enjoys considerably higher rainfall than the Aurangabad region, the average rainfall of the Pune region is 1122 mm and for the Aurangabad region, it is 800.3 mm with wide variations among the different districts. The incidence of poverty is also low in the Pune region in both rural and urban areas compared to Aurangabad Region. In terms of socio-economic development in parameters like District Total Income, Per Capita Income, and HDI Pune is far ahead of Aurangabad Region.

The study finds significant differences in terms of availability and accessibility of water, the incidence of poverty, and socio-economic development between the Pune and the Aurangabad Regions. Hence null hypotheses are rejected and alternate hypotheses are accepted.

From the above findings, it can be concluded that the availability of water and development in terms of different parameters are closely related to each other. A well-planned and well-developed water infrastructure in emerging countries will contribute to developing economies in their own right. Moreover, it will provide 'stronger and more stable platform for growth' (Morgan, 2014).

Hence for the holistic development of various regions of the state, planning and strategies for proper management of water resources

and improvements in availability and accessibility to water are needs to be included in policy decisions.

References

1. Ashok Nigam, B. G. (1998). *FRESH WATER FOR INDIA'S CHILDREN AND NATURE Learning from local level approaches*. WWF and UNICEF. Retrieved from <https://www.ircwash.org/sites/default/files/822-IN97-14560.pdf>
2. GoM. (1999). *Maharashtra Water and Irrigation commission report*. Mumbai: Government of Maharashtra.
3. Kumar, M. D., & R. Maria Saleth. (2018). Inequality in Indian Water Sector: Challenges and Policy options. *Indian Journal of Human Development*. Retrieved from <file:///D:/Ph.d%20Work/Research%20Papers%20Written/Research%20Paper%201/Inequality%20in%20India's%20Water%20Sector%20Challenges%20and%20policy%20options.pdf>
4. Mitra, A. K. (1998, July 3). Development and Management of Irrigation in Maharashtra: With Special Reference to Major and Medium Surface Irrigation Systems. *Economic and Political Weekly*, 33, A80-A95. Retrieved from <https://www.jstor.org/stable/4406932>
5. Morgan, G. R. (2014, August). Market for investment in water technologies. *American Water Works Association*, 106(8), 126-130. Retrieved from <https://www.jstor.org/stable/jamewatwo rass.106.8.126>
6. Nag, B. a. (1975). Water and human needs. *Second World Congress on Water Resources*,. Delhi: CBIP.
7. (2013). *Poverty Estimates for 2011-12*. GOVERNMENT OF INDIA Press Information Beureau.
8. Prabhu , K. S., & Serker, P. C. (1992, September 5). Identification of Levels of Development: Case of Maharashtra. *Economic and Political Weekly*. Retrieved from <https://www.jstor.org/stable/4398849>
9. Srikanth, R. (2009, August 10). Challenges of sustainable water quality management in rural India. *Current Science*, 97. Retrieved from <https://www.jstor.org/stable/24111997>

Skill Of Librarian In The Age Of Information Technology

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DOI- 10.5281/zenodo.7430952

Abstract:

Technology has changed library services in particular, the use of the IT has made a significant difference. We are living in the knowledge age. Knowledge is the basic requirement for every human activity. In knowledge-based society librarian needs to acquire some new skill to satisfy the information need of the user. This article highlights the important skills for librarian and role of librarian in the age of information technology.

Keywords: IT, Changing role of New Age Librarian.

Introduction:

In modern age, information is undergoing a rapid change. As the traditional custodian of information, librarian needs to be aware of the implications of these changes and develop technological and managerial skills which will enable them to make effective use of information and to meet their organization, changing information needs. Librarian should keep in touch with modern developments and maintain a productive approach in their work in an ever-changing information world.

Changing Role of Library & Information Service:

In the present technological era professionals have to change themselves as the information processing is being changed. Now information specialists have to work as e-information resources in which various professional groups are expected to map strategies that lead to produce, manage, maintain and service the information. In addition to being library manager they also act as collection development, technical processors and so on, taking care of information quality. To meet information need of the user they should know how to manage and deliver appropriate information services. Library professional are increasingly responsible not only to provide traditional library information services but also to deliver online information services according to the actual user needs. Due to technology revolution, there is a rapid change in the publishing media also like E-books, E-journals, CD- Rooms, online database etc. everything is available in digital form that can be stored and utilized effectively and efficiently. Librarian need to keep up to date with new electronic information products and modes of information delivery.

New Challenges for library and information service professionals:

21st Century the major challenges are Information Explosion, Information & communication technology, ICT revolution, Explosive growth and usage of web resources. The following are some of important item of new technologies on which LIS professionals need to seriously think about improving their competencies for their effective utilization to deliver need based high quality information services to the user community.

1. ICT Trends.
2. Metadata standards
3. Web technology
4. Search technology
5. Digital Information Resources
6. Subject Gateways
7. Information portals and vortals
8. E-learning
9. Online information Services
10. Digital rights management
11. Wi-Fi and RFID Technology

So, it is essential that library professionals are well trained and possess requisite knowledge and skills in this respect.

i) Knowledge & Skills- Librarian need to know understand Knowledge resources (books, journal, resources, internet) etc. Technological facilities and resources (computer, online catalogues, websites, LAN file, servers. etc.), financial resources (Budget) Human Resource. etc.

ii) Competencies that required to possess in LIS of Professional

Acceptance of Knowledge of user interaction with knowledge resources

Provide Quality users, make them accept the changes Be an information Management strategist etc. Be resourceful Possess excellent communication Skills, constantly update personal, knowledge base by keeping in touch with the latest development.

Create awareness among the users, make them accept the changes.

Be an information management strategist etc.

iii) Technical Knowledge required

a. Operating Systems- windows, UNIX, LINUX etc.

b. World processing, Graphics, spread sheet & presentations.

c. Database management system including the skill in Bibliographic Database Management Systems etc.

d. General purpose programming, Networking etc. e. Web page development and content management.

f. Information Retrieval Software for online, CD-ROM and Internet etc.

g. Library software packages, acquaintances with digital library Tools.

Conclusion:

The world of information is undergoing rapid change. As traditional custodians of information, librarians need to be aware of the implications of these changes and develop technological and managerial skills, planning, organizing, leading, controlling etc., which will enable them to make effective use of information and to meet their organizations changing information need. Development of information technology is playing a crucial role in restructuring of the librarians. The role of librarian has changed in the information technology Era. The library and information professionals are required to acquire such knowledge and skills as the library is one of the highly IT influenced service profession. The empowerment of library and information professionals with IT skills is aimed at providing services that are expected of from the clientele in the new environment.

References:

1. Chante, P. B. (2011). Skill for librarian in the Age of Knowledge. *Indian Streams Research Journal*. 1:187-190.

2. Kaul, H. K. (1998). Library and Information professionals in 21st century. *University News*, 35 (19):11-13.

3. Tanawade, M. S. (2011). Effective Interpersonal Skills for library Management. *Indian Streams Research Journal*. 1:184-186

4. Wiederhold, Gio. (1995). Digital libraries: value and productivity communication of the *AXM*, 38(4).

Comparative Study of New Woman in Manju Kapur's "Difficult Daughters" and Ama Ata Aidoo's "Changes: A Love Story":

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DOI- 10.5281/zenodo.7430960

Abstract:

The study of the protagonist's metamorphosis and how it affected their evolution is included because the topic of the book evokes the idea of a new woman. The subject emphasizes women's ongoing battles with various emotions including meekness and repression, as well as their pursuit of freedom and a happy life. We saw how the character perfected themselves through persistent struggle and learned to play the game of life in accordance with their own rules and preferences. They develop into little more than puppets in the hands of the patriarchal society. They demonstrate that they have the power to control their own fate. The current study examines the female protagonists of a selected Manju Kapur and Ama Ata Aidoo novels. They demonstrate their capacity for adaptation and adoption. The study's primary objectives are to explore issues affecting women and to concentrate on the personalities and pursuits of the heroines. We observe that once suppressed and downtrodden women emerge from the patriarchal system, they are better able to make a name for themselves. Beyond all of these roles, Manju Kapur and Ama Ata Aidoo reveal the woman as a self-sufficient person with free will, and we perceive this self-sufficient woman as the embodiment of the new woman. The chosen topic emphasizes the necessity for women to express themselves and speak out against the patriarchal society by encouraging them to break out of their shells. Breaking out from tradition is vital if they want to understand who they are. They must create their own identities in order to become accepted members of society. Manju Kapur and Ama Ata Aidoo consider the complexity of existence, numerous histories, cultures, and value systems in their works. Physical violence and social rejection are inflicted upon their patriarchally influenced and downtrodden women. Their gender causes them to be more prejudiced and discriminatory. But because they do not want to be social rubber dolls, they are always working to establish their identities. The works by these authors mostly explore the subjects of education, marriage, and polygamy. These female authors generally portray the emergence of new women in their works; these "New Women" are the byproducts of the shifting social environment and are persistent in establishing their distinctive presence in the society and nation to which they belong. These women are rather revolutionary, and they use education to showcase their individuality and independence. They have strong opinions and are independent, tenacious, and goal-oriented. The expressions "new woman," "new freedom," and "sexual revolution" all referred to cultural changes that made it possible for young women to leave the Victorian home and enter the previously male-only public sphere. This also caused major emotional issues for women because many of them were unable to manage the new situation or balance their private and public lives in a new and changing society.

Introduction:

What is New Woman:

The late nineteenth-century feminist ideal known as "The New Woman" had a significant impact on feminism far into the twentieth century. In her piece "The New Aspect of the Woman Question," which appeared in the North American Review in March 1894, author Sarah Grand introduced the term "New Woman". Henry James, a British-American author, further popularized the word by using it to characterize the rise in feminism and the emergence of educated, independent career women in both Europe and the United

States. The New Woman stretched society's boundaries, which are largely determined by men. The New Woman desired to be free to go places on her own; traditionally, respectable women were watched over by a guardian or friend of some sort. In view of the increased chances for higher education, women could choose to forego the home sphere that was assigned to them and begin vying for occupations that were previously only held by men. With a job, The New Woman could take charge of her life and decisions because she would no longer need to get married in order to feel secure. The New Woman believed that she could obtain

an education and support herself financially in society without always having to find a husband. The established gender norms were threatened by The New Woman's refusal to bear children and her masculine appearance. It is interesting to note that the New Woman was simultaneously portrayed as non-female, unfeminine, and ultra-feminine. Being thin, mannish, and/or sexy was the most important quality; having strong emotions was considered as questionable. Women changed, but they also gave up their previous domain, the house. If a woman's basic requirements go beyond wanting equality with males, expressing her own individuality, and being conscious of her own rights as a woman—and not as a mother, a wife, or a daughter in law—then she is considered “modern” or “new.” A woman who rebels against authority is not considered a new woman. When the woman evaluates and considers her place in the social, moral, and spiritual spheres, she can be new. Not only new women ponder about these topics and their place in society; occasionally, ordinary women do as well. She begins by considering social, moral, and intellectual issues. The new women consider more than just their place in society; they also consider the part they play in a world where men predominate. She strives to develop her own way of thinking and intellectual capacity. After a protracted exploration of her strong desire to be recognized as an individual with personal autonomy—an independent femininity with a free mind and spirit—the genuine concept of the new woman has emerged. She also fights for the abolition of patriarchal dominance in order to make a difference in society. This study's conception of the new woman is not the study of contemporary or even modern women. The key factors affecting how women define themselves are the complexity of life as well as varied histories, cultures, and values. However, contemporary women aspire to overcome these challenges by possessing some unique qualities, such as equality, uniqueness, etc.

Manju kapur as an Author:

A significant novelist of the twenty-first century is Manju Kapur. She was born on August 6, 1948, in Amritsar. She has experienced difficult times in India. The Miranda House University College for Women is where she received her degree. She then pursued an M.A. at Halifax, Nova

Scotia's Dalhousie University and an M.Phil. at Delhi University. Although she is currently retired from Miranda House, Delhi University, she still teaches English literature there. She began by writing theatre, then poetry. She discovered that writing novels was her strength, and she is now a novelist full-time. Manju Kapur is the author of five novels, including *Custody* (2011), *The Immigrant* (2009), *Home* (2006), and *Difficult Daughters* (1998). Her debut book, *Difficult Daughters*, was widely praised abroad. The Commonwealth Writers Prize for the finest first book was given to this work. In India, it was the best-selling item. *Home* was on the Hutch Crossword Book Award shortlist. Both inside and outside of India, her books have been translated into other languages.

Ama Ata Aidoo As an Author:

Ama Ata Aidoo, a writer from Ghana, was born in 1942. She has written English-language plays, novels, short stories, and poems. Before relocating to Zimbabwe to pursue writing full-time, Aidoo lived and taught in the USA. She was awarded the 1992 Commonwealth Writers Prize for Best Book for her book *Changes* (Africa). The drama *Dilemma of a Ghost* (1956) and the anthology of short stories *No Sweetness Here* are among Ama Ata Aidoo's works (1970). Aidoo didn't publish a lot of material between 1970 and 1985, the year *Someone Talking to Sometime*, a collection of poems, was published. Her later works include the novel *Changes: A Love Story* (1991), the poetry collection *An Angry Letter in January and Other Poems* (1992), the collection of children's stories *The Eagle and the Chickens* (1986), the collection of short stories *The Girl Who Can and Other Stories* (1997), and the collection of short stories *Diplomatic Pounds and Other Stories* (2012).

New Woman in Manju Kapur's "Difficult Daughters":

Manju Kapur's "Difficult Daughters" is based in part on the life of her mother, Virmati, and is set during the struggle for India's freedom. The reader will meet Virmati, a strong and independent woman founded on patriarchal tradition, thanks to Kapur. Although Virmati is intelligent and financially independent, Kapur focuses on the fact that she still experiences hardships as the Professor's second wife. The example of Virmati demonstrates that breaking

patriarchal conventions requires more than just education and financial freedom. One needs resolution and a strong will to declare their self-identity. Virmati's early rejection of her engagement to her fiancé, which she did in opposition to her strict Arya Samaj family, which also included her parents, paternal grandfather, and aunt (the father's sister), is a prime example of her rebellious nature.

Virmati's attitude in this regard fuels her need to carve out a place for herself. According to Kapur's portrayal of Virmati, she is a revolutionary who fights for the right to seek an education and someone who rises to the occasion in challenging situations. Virmati is the start of a "New Woman" since she doesn't want "to be a rubber doll for others to move as they willed" (DD, 85). She overcomes her disappointment by demonstrating an amazing mental fortitude. "Strong to bear the pain, silently, without anyone knowing" (DD, 101). As she destroys the professor's letters, she does so with resolve and unfazedness. It shows her will to end their illicit relationship and look forward to leading a fulfilling life in Lahore. Shakuntala, Virmati's cousin, claims that there is nothing wrong with her and that she is not the kind of girl to abruptly cancel an engagement. There was no way Virmati could be at blame. Virmati did not know what to say "that part of her life was closed. Discussing it brings back the pain" (DD, 115). In Lahore Virmati "... was to be supervised like a jailbird on a parole. Marriage is acceptable to her family, but not independence" (DD 115). However, Virmati's incompatibility is only briefly present, and she is unable to transform into a "New Woman." Although she takes a firm stance against the professor, in Lahore she caves in to his pleading and fervour. Their friendship develops into a passionate one when Harish travels to Lahore with Virmati. The inability of Virmati to adhere to the ingrained social code has caused her to encounter new challenges. Virmati fights to find new ways of living established by colonial patriarchal domination by rejecting the socially prescribed standards for women's behaviour. Her inability to adhere to social norms does not provide her happiness or independence; rather, it leaves her feeling imbalanced and alone, which finally leads to her marriage to Harish, a married man she adores. The best illustration of an influential Indian feminist

who dealt with a specific socio-historical setting is Virmati. Another major setback in her life is the professor's marriage to Virmati, and she now regrets ever getting married to him. She is striving to establish herself as a second wife through modification and compromise after suppressing all of her revolutionary principles. As mentioned by Grewal in "Manju Kapur's Virmati in *Difficult Daughters: A New Woman*", "Thus Virmati dares to cross one patriarchal threshold, she is caught into another, where her free spirit is curbed and all she does is adjust, compromise and adapt. She is a loser whose acts totally alienate her from her family and her fails to create a space for herself for whom she had been striving all alone" (Grewal, 60). Virmati decided to pretend to be a second wife in order to avoid social stigma associated with having a child before marriage. She chooses to renounce her status as a revolutionary woman in favour of taking on the role of a wife who asks her husband for permission. She is completely cut off from her family as a result of Virmati's activities, and she is unable to carve out the space for herself for which she has been striving on her own. She is now comfortable with her status as a "second wife," which is acceptable in Indian custom, rather than continuing her relationship with Harish that they had before they got married. She continues going back to the outdated social norms, masculine dominance, and outdated views. Virmati locks herself up voluntarily because she lacks "resistance". She can fight against her society and family, but she can't fight against Harish's love. She was marginalised forever after losing her identity somewhere in her marital house. The female heroines of Manju Kapur's works do not develop into new women in the traditional sense despite receiving education and independence. Their free souls are restrained and all they can do is "adjust, compromise, and adapt" even though they dare to breach one patriarchal threshold and are then snared by another. She depicts the constantly evolving image of women in her works, one that is shifting away from the stereotypical image of enduring, selfless women and toward one of ambitious, dependent women. The concept of new women in Indian society or for Indian society is completely different from the one in the west. Her female characters defy

conventional morality and move toward modernism and novelty in her stories. Manju Kapur aims to express her own wish for the development of new women in reality through the characters she creates.

New Woman in Ama Ata Aidoo's "Changes: A Love Story":

Esi was a protagonist of the *Changes*. She is an ideal epitome of New Woman. She should have shown some patience in circumstance which comes in her family life. After her marriage to Oko, Esi "Definitely put her career well above any duties she owed as a wife." She "complained" constantly every time she had to walk into the kitchen. She claims that the reason she left Oko is that she lacks personal time. Even when Ali offers her a lot of alone time, she still has a problem and constantly laments the attention Oko provided her but that she wasted. While Esi ends up with an unofficial divorce in her first marriage and an official divorce in a second marriage because she was unable to manage her marriage properly and in other side Fusena had to deal with a polygamous husband. Fusena and Opokuya, who also resemble new women in *Changes* to some extent, are likewise playing the roles of mothers and trying to maintain their filial lives at the same time. According to the description, Fusena is a primary school instructor who has completed a postsecondary teacher preparation course. Her schooling came very close to securing her a marriage and a job that may have given her financial independence. The contradictory aspect of it is "that the few men who claim they like intelligent and active women are also interested in having such women permanently in their beds and in their kitchens." (*Changes* 54) It appears in the conversation between Esi and Opokuya. The smart ladies that men meet and fall in love with are sharp because, among other things, they have hard occupations in stimulating environments, according to Aidoo. Few men are aware of this, though. Some of these individuals are unwilling to acknowledge the challenging tasks that go along with these fascinating occupations. These kinds of labour keep a woman's mind active and interested. Aidoo adds that: "the first thing a man who marries a woman mainly for the quickness of her brain tries to do is to get her to change her job to a more reasonable one...and then the more reasonable job, is

often quite dull too." Naturally, the intent behind this assertion is to maintain the woman in the conventional role associated with womanhood. The woman will be judged for being stupid and lacking in intelligence because of this entrenched position, which is incredibly difficult to swallow. (or, satisfying a man's appetite and urges to procreate.) Again, the able-bodied woman who must change her posture in this fashion usually feels unfulfilled, bored, and unhappy. Exactly the same thing occurred to Fusena after she wed Ali. Fusena appears to have been persuaded by Ali to utilize her intelligence and resourcefulness to care for herself and their unborn child while he was away. It's noteworthy that Fusena's schooling did not completely free her. She benefited economically from it, but she wasn't content with it. As indicated by the fact that he later wed a different woman with a master's degree and added his assistant, Ali believed that education and an enterprising bride were no panacea for adultery. The pitiful way in which Fusena's character is described precludes readers from seeing her as a wonderful role model for women, despite the fact that she is in some respects depicted as a new woman. She is portrayed as a strong woman who manages her polygamous husband and her new profession, but she is not elevated since she is angry because her husband chose a lady with more education to be above her and she was powerless to stop it. Opokuya, on the other hand, manages her marriage despite the challenging circumstances. Opokuya is portrayed by the narrator as more of a stereotypically strong female figure on this particular note. Because she stands up against injustice and refuses to let being called "fat" make her feel inferior, Opokuya is strong. "She had been a state registered nurse and a qualified mid-wife, for nearly fifteen years" (*Changes*, 18). The narrator describes Opokuya as "certainly overweight" and notes that she is heavier than Esi. She couldn't care less. Every day of the year, she laughed and was nimble on her feet. She made it pretty clear every time the matter of her weight came up that the reason, she was overweight had nothing to do with her lack of understanding on how to deal with it. Esi and Opokuya, two African women, are contrasted in this passage. The idea is to show how Opokuya continues to stand out for her open-minded view on

African women whereas Esi, despite her high social rank, suffers from her rigid, westernized lifestyle. Opokuya had decided she wanted four children for herself. She talked about the matter with her husband Kubi after having them. Even with reference to herself, Opokuya had yet to find a neat solution to the weight problem. Sometimes she would say that she was a bit worried about the possibility of a cardiac problem. She regularly checked her blood pressure, and it remained unexpectedly normal. In addition, she had long ago decided that she could live without the more obvious illegal goods like sugar and fatty foods because she didn't know how far her body could expand. So it was that knowledge and this discipline which gave her the confidence to argue hotly. (Changes, 16) The narrator accepts and embraces Opokuya's character as the appropriate woman whose character is admirable, despite the fact that it is difficult to live in the kind of patriarchal culture present in Aidoo's *Changes*. Although not all of the New Women disapproved of motherhood, many did because it was thought that having children and rearing them would keep a woman at home. These were just a few of the attributes that made up the New Woman and the Victorian ideal of femininity, but the meticulously made moulds that women had been shaped into was starting to fall apart. Because of her ability to live harmoniously with her husband and four children, the narrative voice supports Opokuya's character. It is important to note that Opokuya chooses to buy her own car despite a severe disagreement over the use of their car in order to restore harmony in her household. She embodies the Stivanist's thesis that "African women are indissolubly tied with men and so must seek out ways of coexisting happily and amicably with men". It is advantageous when a woman's salary enables her to make such a significant decision to bring peace into her home. This is made feasible by the economy of Opokuya's independence. She might be able to achieve this financial freedom by furthering her education.

Comparative Aspect:

Manju Kapur and Ama Ata Aidoo are two female writers who critique the phallogentric patriarchal culture in a feminocentric approach through their

literature. The patriarchal society imposes numerous limitations on women. They provide strong female characters like Virmati, Astha, Esi, Opokuya, and Fusena the ability to vehemently challenge patriarchy by disregarding social norms. They choose this peculiar route in order to live and discover more about themselves. They are able to satisfy their own needs as a result, leading to psychological independence. They introduce a New Woman figure that is self-conscious, educated, aware of her surroundings, and somewhat driven to build a life for herself. In the patriarchal system, women's roles and the teaching of their sex roles are very well defined. Any departure from this assigned task is frowned upon and may result in severe repercussions. It is believed that all deviant sexual behaviour goes against nature and must be stopped. These authors contend that rather than biological causes, women's oppression has cultural origins. In this circumstance, it would be fair to refer to them as "culturally marginalized women." The traditional approach has long forced women to live in abject poverty. As soon as adolescents become aware of their brewing rebellious tendencies, they feel guilty. This sense of mental servitude and subordination is one of the key reasons women are less progressed than men. A conflict of the sexes or unreasonable responses between them are not necessary for women to have a respected place in society. With proper grooming and a positive view on life, you can address this psychological condition. This appears to be the common theme in all of the literature by women, regardless of where they are from. Modern women are more aware of their potential and are able to keep up with the fast-changing standards of living on a mental and physical level. Her journey, however, cannot be finished without the support of her companion's friendship. Women in the modern or new era recognized the value of individualism and the necessity of rebelling against societal norms or taboos. One must first understand the traditional woman's life in order to understand the function of the new woman in society, as one cannot understand the new woman's function without first understanding the traditional woman. The novels of Kapur and Aidoo significantly influenced postmodern English literature. Realistic portrayals of the

characters show how they reflect contemporary culture. They have given consideration to the requirements, disputes, and survival of women. The parallels between Manju Kapur's and Ama Ata Aidoo's works demonstrate that the need to understand the past in order to understand the present is more than just a sentimental goal; rather, it suggests that the problem of how to maintain generational continuity in a contemporary environment seems to exist in a field without boundaries. In terms of marriage, Kapur has proven to be accommodative. Even when her female characters in marriage suffer, they continue the marriage-based bond. After marriage, Virmati of *Difficult Daughters* encounters challenges as the second wife of a professor. Despite this, she maintains her marriage, accepts her circumstances, and ultimately finds happiness. In Aidoo's work, the main characters take risky actions both before and after getting married. They choose the partner themselves. Because they want freedom, they don't hesitate to end their marriages. Realistic characters have been developed by Aidoo and Kapur, respectively. The strong and independent women in Kapur's stories. Aidoo has also developed characters who are confident and strong. The characters in Kapur's books are well-educated, employed, and financially secure. The apparent reasons for the bolder behaviour of Aidoo's female protagonists are their education, freedom, and mobility. Despite all obstacles, Kapur's heroines manage to keep their relationship going. They have given up on their desire to live with their husband and family. The heroines of Aidoo's leave their husbands as soon as things get too bad. Because Kapur's literature portrays the crises of the modern man in India, readers may identify with and relate to these everyday struggles when they read it. Aidoo has essentially depicted the New Woman in Ghanaian society. She also emphasized modern topics such as psychiatric problems, women's freedom of sex, and other facets of contemporary life.

In the rigidly organized and tradition-bound civilizations of Ghana and India, women suffer the most because social conventions and moral codes have been constructed in a way that is especially damaging to them. This is possibly the reason why Indian and Ghanaian female

novelists, who are also influenced by their historical and cultural context, continue to address the feminist phenomenon in their fictional works by depicting Indian and Ghanaian women whose lot has been to endure repression from the authorities in silence for a very long time. Because of their high intellectual accomplishments and command of modern sciences, particularly psychology, these novelists fully concentrate on the suffering of their characters and put their private lives and social constraints in perspective. Their naturally feminine sensitivity gives their writings a sympathetic tone and a psychological depth that complement their observations.

Bibliography:

1. Kapur, Manju. *Difficult Daughters*. New Delhi: Penguin, 1998.
2. Kapur, Manju. *A Married Woman*. New Delhi: India Ink, 2002.
3. Kapur, Manju. *Home*. New Delhi: Random House India, 2007.
4. Grewal, Natasha. —Manju Kapur's Virmati in *Difficult Daughters: A New Woman*. *American International Journal of Research Humanities*, 5.1(Dec.2013-Feb.2014): 57-60. Web. 18 Sept. 2015.
5. Ogun-dipe-Leslie, M. (2007). *Stiwanism: Feminism in an African context*. In T. Olaniyan & A. Quayson (Eds.), *African literature: An anthology of criticism and theory* (pp. 542-550). Oxford, UK: Blackwell Publishing Ltd.

Challenges Of Entrepreneurs to Start-Up the MSME Sectors in Tiruvannamalai District

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DOI- 10.5281/zenodo.7430970

Abstract

An entrepreneur is a person who contributes significantly to a country's economic progress. Basically, an entrepreneur is a person who has the initiative, skill, and ambition to start his or her own firm or industry and who is constantly striving for great performance. Indian Government framed many policies to new and existing Entrepreneurs and conducted various ED Programmes to them. Anyway there is so many problems faced by entrepreneurs to start up the MSME sectors. The main objectives of this study is to find the problems faced by entrepreneurs in establishing Micro, Small and Medium Enterprises sector in Tiruvannamalai District. With around 50,000 registered MSMEs are situated in Tiruvannamalai District. During 2021-2022 nearly 350 MSMEs are newly established Tiruvannamalai District. In that five MSMEs, 200 new entrepreneurs are selected as sample unit and size of this study by using stratified random method. This research paper is fully descriptive in nature. Primary data is collected via well-structured questionnaire, it consists of three parts like socio economic factors of respondents, individual, administrative problems and marketing problems faced by the new start-up entrepreneurs in Tiruvannamalai District. Secondary data is collected via journals, magazines, unpublished thesis, books, Annual reports and newspapers. Percentage Analysis, Weighted average method and Kursal Wallis test were used to analyse the collected data. Findings of the study revealed that there is a significant relationship between the investment made by the entrepreneur and marketing problems faced for establishing the new units.

Keywords: MSMEs, Start-up Entrepreneurs, Problems and Tiruvannamalai District.

1. Introduction

In terms of the number of businesses and jobs, Tamil Nadu is the third most populous state in India for MSMEs. Every company organization's lifeblood is finance. It is a must-have for entrepreneurs who want to build and run Micro, Small, and Medium Businesses. Entrepreneurs can contribute their hard-earned money to establish a firm, but it is impossible for anyone to arrange finance for ongoing operations and expansion of a business on their own. MSME loan/finance schemes were introduced by the Indian government for the promotion and growth of MSME. Micro, small, and medium businesses (MSMEs) are considered one of the most important factors in a country's economic development. How the job goes from defensive to constrained time through auxiliary tasks and the utilisation request calculation is the actual test. A swift injection of funds into enterprises and a rebuild of the MSMEs division are essential to truly understand the 'Make in India' concept. A new monetary bundle is required to re-energize the market economy. When it comes to starting a new firm, the ease with which people can collaborate becomes critical. Indian officials have been charged with figuring out how to keep MSMEs afloat if the blockade is lifted. It is vital for India to try to

adapt the rapid monetary reaction with open and human capital enterprises on a constant basis. In an emergency, eating the budgetary bullet is inescapable, but analysing the cost of advancement is unavoidable, and planning future strategies is critical. Financial relief guidelines, as well as processes to give monetary stability to individuals working with MSMEs, must be followed in this situation. For the purposes of this study, the following MSMEs were chosen.

Food based Products
Leather based Products,
Chemical based Products,
Metal Products and
Paper based Products

2. Review Of Literature

Daniel, Agbenyo (2015), the overall goal of this study is to learn more about the credit issues that SMEs face in Ghana's Ashanti Region's Kumasi Metropolis. It also looks into the requirements for micro financing SMEs and how that affects their operations in the Kumasi Metropolis. It looked into the difficulties that SMEs in the Metropolis have in obtaining microcredit. Shashikala. K, Mathiraj. SP (2016), with the use of statistics, the article provides insights into small-scale industry financing in India. The contribution of the State Financial Corporation, SIDBI, and Commercial Banks

to India's small scale companies has been discussed year by year in the paper. According to Subramanian et al., technological distance has an inverted u-shaped impact on interfirm learning (2018). "When alliance members' knowledge bases are homogeneous, the benefits of technical distance are increased and the costs of technological distance are minimised," the relationship found. Osman et al. (2019) "Firms and businesses can strengthen their internal capacity through a cross-broader strategic interfirm alliance that helps firms and businesses strengthen new product development, improve operational productivity, create new value propositions, and enhance business strategy through design," according to the researchers. According to Fornaro and Martin (2020), the Coronavirus outbreak caused a long-term supply disruption that could endure well beyond the pandemic's end. According to the study, the virus's spread could result in a demand-driven slowdown in operations, as well as a supply–demand doom cycle and stagnation traps. Bold policies to boost investment in all parts of the economy, including operations, according to the paper, can break the supply–demand doom cycle and revitalise global economies.

3. Statement Of The Problem

Many firms are struggling to keep up with current customer demands, leaving little time or money to pursue new, more critical initiatives. Industry 4.0, which encompasses collaborative robotics, autonomous material movement, the internet of things, and artificial intelligence, will necessitate additional funding to become a reality. MSMEs experienced issues even before the pandemic, including as late payments, over-dependence on a small number of customers, and a skilled labour shortage. The pandemic has broken MSMEs' backs, and survival is now their greatest issue. The present study focus on the problems faced by the selected start-up entrepreneurs in Tiruvannamalai District.

4. Objectives Of The Study

To analysis the demographical profile of the selected start-up entrepreneurs in Tiruvannamalai District.

To examine the problems faced by the selected start-up entrepreneurs in Tiruvannamalai District.

5. Hypothesis

Ho1: There is no significant relationship between the Age of the entrepreneur and problems faced for establishing the new units.

Ho2: There is no significant relationship between the educational qualification of the entrepreneur and problems faced for establishing the new units.

Ho3: There is no significant relationship between the investment made by the entrepreneur and problems faced for establishing the new units.

6. Research Methodology

Major Five MSMEs and 200 new entrepreneurs are selected as sample unit and size of this study by using stratified random method. This research paper is fully descriptive in nature. Primary data is collected via well-structured questionnaire, it consists of three parts like socio economic factors of respondents, individual, administrative problems and marketing problems faced by the new start-up entrepreneurs in Tiruvannamalai District. Secondary data is collected via journals, magazines, unpublished thesis, books, Annual reports and newspapers. Percentage Analysis, Weighted average method and Kursal Wallis test were used to analyse the collected data.

7. Results And Discussion

7.1 Demographical Profile of the Entrepreneurs (Percentage Analysis)

The present study confines the demographical profile of 200 respondents are age, educational qualification, monthly income, Area of Residence, New Business Experience and Investment, Parameters, frequency and their percentage of different variables are tabulated as under in table 1.

Table 1
Demographical Profile of the Entrepreneurs

S.No	Variables	Parameters	Frequency	Percentage (%)
1.	Age	Below 25	09	4.5
		26-35	35	17.5
		36-45	48	24.0
		46-55	59	29.5

		Above 55	49	24.5
		Total	200	100
3.	Educational qualification	Illiterate	02	1.0
		Primary level	06	3.0
		High school	58	29.0
		Under Graduate	99	49.5
		Post graduate	35	17.5
		Total	200	100
4.	Monthly Income	Up to 25000	24	12.0
		25000-50000	74	37.0
		50000-75000	46	23.0
		75000-100000	31	15.5
		Above 100000	25	12.5
		Total	200	100
5.	Area of Residence	Rural	96	48.0
		Urban	104	52.0
		Total	200	100
6	New Business Experience(in months)	0 – 3 months	37	18.5
		3 – 5 months	68	34.0
		5 – 7 months	56	28.0
		7 - 12 months	39	19.5
		Total	200	100
7.	Investment in Business (Rs)	Below 10 lakhs	52	26.0
		10-20 lakhs	41	20.5
		20 – 30 lakhs	38	19.0
		30 – 40 lakhs	28	14.0
		40-50 lakhs	30	15.0
		Above 50 lakhs	11	5.5
		Total	200	100

Sources: Primary Data

The above table-1 reveals that majority of the respondents are in the Age group of 46-55 (29.5%). Most of the respondents are under graduates (49.5%) as compared to other educational groups. Majority of the respondent's family monthly Income fall under Rs. 25000 - Rs. 50000 (37.00%). Majority of the respondent's Area of Residence is urban area (52.0%). Majority of the respondent's Business Experience is 3 – 5

months (34.0%). Majority of the respondent's Investment in Business is Below Rs.10 lakh (26.00 %).

7.2 Problems faced by the start-up entrepreneurs (Weighted Average Method)

Mean Score and Rank for problems faced by the start-up entrepreneurs in Tiruvannamalai district is shown in table-2.

Table-2
Problems faced by the start-up entrepreneurs

Factors	H.A	A	N.O	D.A	H.D.A	Total Score	Mean	Rank
Individual Problems							3.22	III
Capital for the Start-up	35 (175)	76 (304)	12 (36)	34 (68)	43 (43)	200 (626)	3.13	
Liquidity or Cash Crunch	36 (180)	84 (336)	20 (60)	31 (62)	29 (29)	200 (667)	3.335	
Finding Good Employees	38 (190)	71 (284)	17 (51)	38 (76)	36 (36)	200 (637)	3.185	
Administrative Problems							3.66	I
Labours	67 (335)	80 (320)	8 (24)	21 (42)	24 (24)	200 (745)	3.725	
Location/Infrastructure	61 (305)	73 (292)	17 (51)	28 (56)	21 (21)	200 (725)	3.625	
Technical Knowledge	47 (235)	96 (384)	12 (36)	26 (52)	19 (19)	200 (726)	3.63	
Marketing Problems							3.51	

Finding Good Customers	84 (420)	71 (284)	7 (21)	20 (40)	18 (18)	200 (783)	3.915	II
Utilization of Capacity	45 (225)	66 (264)	10 (30)	36 (72)	43 (43)	200 (634)	3.17	
Procurement of Raw Materials	50 (250)	74 (296)	20 (60)	27 (54)	29 (29)	200 (689)	3.445	

Sources: Primary Data

Table - 2 confines that 'Administration' is the major problem of start-up entrepreneurs Tiruvannamalai district. Followed by 'Marketing', 'Individual' are the problems of start-up entrepreneurs Tiruvannamalai district.

7.3 Relationship between the Age, Education and Investment of the entrepreneur and problems faced for

establishing the new units (Kursal Wallis test)

To analysis the Relationship between the Age, Education and Investment of the entrepreneur and problems faced for establishing the new units, Kursal Wallis test is applied and the result is displayed in Table -3.

Table -3
Result of Kursal Wallis test

Problems	Age		Education		Investment	
	H Value	Sig.	H Value	Sig.	H Value	Sig.
Individual problems	0.171	N.S	0.072	N.S	0.121	N.S
Administrative problems	0.167	N.S	0.184	N.S	0.227	N.S
Marketing problems	0.062	N.S	0.135	N.S	0.012	S

Sources: Computed from Primary Data

Individual problems and Administrative problems: The H value is higher than 0.05 in all the variables. So null hypothesis is accepted. It is concluded that there is no significant relationship between the Age, Education and Investment of the entrepreneur and Individual problems and Administrative problems faced for establishing the new units.

Marketing problems: The H value is less than 0.05 in case of Investment. So null hypothesis is rejected in this case. Hence it is concluded that the variable of investment is having a significant relationship on marketing problems. The variable of age and education are not dependent in case of marketing problems.

8. Findings Of The Study

1. Majority of the respondents are in the age group of 46-55.
2. Most of the respondents are under graduates as compared to other educational groups.
3. Most of the entrepreneur's family monthly Income fall under Rs. 25000 - 50000.
4. Majority of the respondent's area of residence is urban area.
5. Majority of the respondent's business experience is 3 – 5 months

6. Majority of the respondent's investment in business is below Rs.10 lakh
7. 'Administration' is the major problem of start-up entrepreneurs Tiruvannamalai District.
8. There is a significant relationship between the investment made by the entrepreneur and marketing problems faced for establishing the new units.

9. Suggestions Of The Study

The government may start programmes to encourage and support MSMEs at the lowest levels of government. The main MSME ministry is in charge of bringing together multiple government projects. Educate the people about the government's myriad packages and programmes, particularly in rural areas. Provide MSMEs with short-term, interest-free working capital loans. Small businesses can seek for a tax delay to help them deal with cash flow issues. The government may provide assistance to MSMEs in adapting their business models to the changing business climate.

10. Conclusion

Despite the fact that finance is a key requirement, it can be supplied through government schemes for the MSME sector. To take advantage of government schemes, entrepreneurs should improve their financial

management skills. Entrepreneurs can contact the District Industries Centre to learn about the government's many initiatives for beginning and growing a business. During the closure, many small businesses battled to balance production and the funds they needed to stay afloat, and poorer demand and lower customer confidence only contributed to the uncertainty. The MSME sector is sometimes referred to as an economy's "backbone," as it contributes significantly to GDP growth and creates major employment prospects, particularly for people living in rural areas. MSME also plays a significant significance in the Tiruvannamalai District.

Reference

1. <https://msmeonline.tn.gov.in/>
2. <http://www.indcom.tn.gov.in/>
3. Mamta Chaudhary and Anjali Saini, (2015) "Globalization and Its Impact on the Performance of Small-Scale Industries in India", International journal of Trade & Commerce-IIARTC, Vol. 4, No. 1, April, pp.160-171.
4. McKinsey & Company. (2020). How the Covid-19 crisis is affecting UK small and medium size enterprises. <https://www.mckinsey.com/industries/public-sector/our-insights/how-the-covid-19-crisis-is-affecting-uk-small-and-medium-size-enterprises>
5. Fornaro, L., & Wolf, M. (2020). Covid-19 corona virus and macroeconomic policy (CEPR Discussion Paper No. DP14529). <https://ssrn.com/abstract=3560337>
6. Alcalde-Heras, H., Iturrioz-Landart, C., & Aragon-Amonarriz, C. (2019). SME ambidexterity during economic recessions: The role of managerial external capabilities. *Management Decision*, 57(1), 21–40.
7. Subramanian, S., Trischler, A., Bengio, Y., & Pal, C. J. (2018). Learning General Purpose Distributed Sentence Representations via Large Scale Multi-task Learning. Accessed from <https://arxiv.org/abs/1804.00079>
8. Mbau, M. W. (2016). Competitive positioning through strategic inter-firm alliances: A case of Safaricom Limited [Unpublished masters' thesis]. Chandaria School of Business.

It application higher education in the field of distance learning education in Kolkata: a study

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DOI- 10.5281/zenodo.7430974

Abstract

Information Technology Has A Wide Social Application In Almost All Domains And Activities Of Modern Society. Information Technology, Spreading Throughout The World In A Lightning Speed Has Revolutionized Each And Every Sphere Of Human Activity. Information Technology Is Meant For Storing, Processing, And Manipulating Data, Knowledge And Information. Ultimately All These Are Meant For The Benefit Of Society. The Fundamental Characteristic Of Such A Society Is Its Dynamism And Unending Progress. Lifelong Learning Is Essential For The Unending Progress Of Society. Traditional Classroom Learning Is Not Possible And Not At All Desirable For The Lifelong Learning. Moreover Traditional Methods Of Teaching And Learning Fail To Provide Efficient And Effective Learning. So There Must Be Sufficient Distance Learning Centers And Open Universities As An Alternative System Of Education. Application Of Information Technology Application Is The Only Possible Way To Improve The Quality Of Higher Education Through Distance Mode, For Its Modernization. Due To The Explosive Growth Of Knowledge And Its Interdisciplinary Nature, The Information Handling Has Become Extremely Difficult. The Advent Of Digital Computers, Advances In Telecommunication Technology, Wide Spread Use Of Networking, Explosive Growth Of Internet, Mass Storage Media, Virtual Reality And Databases Have Opened Up New Possibilities In Dealing With The Collection, Organization, And Dissemination Of Information. Now Information Can Not Only Be Stored, Retrieved, Communicated, And Broadcasted Electronically, In Enormous Quantities At Greater Speed, But Can Also Be Re Arranged, Selected And Transformed. The Present Problem Under Investigation Is Entitled "Application Of Information Technology (It) In Higher Education In The Field Of Distance Learning Education In Kolkata: A Study"

Key Words: Application, Information Technology, Higher education, Distance Learning.

1. Definition:

Application:

The word "application", according to Oxford English dictionary, is 'putting of anything to use or purpose; specific use' (Oxford English Dictionary, VII, 1970). According to Chamber's 20th century dictionary application means 'the act of applying, administrating or using: a thing applied' (Chambers 20th century thesaurus, new edition, 1983). In the present study the term application is used for the way in which something can be used for a particular purpose.

Information Technology:

UNESCO (1973) defines, Information Technology as "Scientific, technological and engineering disciplines and management techniques used in information handling and processing, their applications, computers and their interaction with men and machines and associated social, economic and cultural matters".

Information Technology can be defined as the acquisition, processing, storage and

dissemination of vocal, pictorial, numerical or textual information by a microelectronics based combination of computing and telecommunication. In short we can say that Information Technology means Application of computer and communication technologies in the handling of information.

Higher education:

According to Encyclopedic Dictionary of Education higher education is "Education beyond secondary school that is viewed as intellectually more rigorous and sophisticated than that of the secondary level, and that either leads to academic degrees or is on a comprehensive intellectual level" In the present study higher education is used for any of various types of education given in post-secondary institutions of learning and usually affording, at the end of a course study, a named degree, diploma, or certificate of higher studies. Higher educational institutions include not only Universities and colleges but also various professional schools that provide preparation in such fields as law, theology, medicine,

business, etc. The basic entrance requirement for higher educational institutions is the completion of secondary education, and the usual entrance age is about 18 years.

Distance Learning:

Distance Learning is a system of teaching and learning in which students study in their own homes or at local centers using materials mailed or broadcast from a central unit. Tutorial work may handle by correspondence or by electronic media with the central unit or a regional basis. The objective is to open up opportunities by overcoming all types of barriers in learning process like economic, geographic, work commitments, and conventional course structures, which have often limited access to educational and training facilities (Sewart, 1993). The last decade has seen a phenomenal growth in distance education and the integration of this method of education with the standard Information Technology applications in a large number of countries to such an extent that it is now no longer possible to think solely about the traditional education using traditional methods.

In the present study distance learning is used as a method in which students study from their places of convenience after registering for a formal course in any Universities.

Word "reference" means the act of referring or the state of being referred; that to which something refers (Reader's Digest Universal Dictionary, London, 1993).

2.. Need And Significance Of The Study

The present study is mainly concerned with society application of IT rather than its engineering or technological or even scientific aspects. IT has great potentialities for speeding up the process of development and it has multiplier effect or impact. Because of its application the whole society is going to realize its wide range impact within a short span of time. The society and its activities are very complex. Some of the well-known social activities can be identified as economic, political, social, cultural, educational and scientific activities. Information Technology must be given top most priority in the sustained development of any country. Then only modern society can be rightly called as 'Cyber society'.

Modern computer and communication infrastructure must be built up, extending

even the remotest places for the development of a country like India. Especially in a situation where traditional Universities and higher education centers fail to fulfill their objectives and Virtual Universities and Tele-teaching methods are going to handle the control of higher education systems. In such a situation there is an urgent need for conducting a study about the application of IT in distance learning in the country, where there are many Open Universities and number of distance learners increasing day by day. The present study is an attempt to study about the present level of application of Information Technology and to explore the possibilities of application of IT in distance learning in higher education in India.

3. Objectives Of The Study

The major objectives of the present study are stated below:

- 1) To assess the background characteristics of distance learners in the field of higher education in India.
- 2) To assess the attitude of distance learners and faculty members towards the distance education and conventional education and to examine the relevance of distance education as an alternate system of education.
- 3) To assess the present status and quality of distance education conducted by Open Universities in the country, and to suggest certain methods for improvement.
- 4) To assess the Information Technology awareness of distance learners and faculty members of the Open Universities in the country.
- 5) To review the availability and use of Information Technology tools at different Open Universities in the country.
- 6) To study about the present status of IT application in the field of distance education in the country and to examine the changes occurred in the curriculum of Open Universities due to the application of Information Technology.
- 7) To explore the possibility of modernization of distance learning through the application of Information Technology and to formulate certain policies and plans for the same.
- 8) To understand whether there exist any significant difference between large/ medium and small open Universities in the application of Information Technology in distance learning.

4. Hypotheses

The main hypotheses of the present study are given below:

1. The learners in the field of distance education in India come from different academic and social background.
2. Distance learning is a highly relevant alternate system of education in the modern times.
3. The academic community in the field of distance education is not satisfied with present methods and practices adopted in the field of distance education in India.
4. The learners and faculty members in the field of distance education in India is well aware and equipped with Information Technology tools.
5. The Distance learning and teaching methods practiced in the country is under the verge of extinction due to the recent developments in the field of Information and Communication Technology.
6. Various distance learning institutions and Open Universities are in different levels in the case of application of Information and Communication Technology.
7. Application of Information Technology is the effective way to improve the quality of distance education and for the very survival of the system in the emerging socio-technological context.
8. There exists significant difference among different groups of faculty members in the use of Information Technology in their practice.

5. Methodology

Research is simply the process of arriving dependable solutions to problems through planned and systematic collection analysis and interpretation of data. The data will be collected through various methods like observation, literature search, interview with schedule and questionnaires. Methodology refers to the sum total of the procedures followed by the investigator to make the study scientific and valid. The quality of any research depends on the methods adopted and the tools and techniques used for data collection and analysis. The nature of the problem and kind of data needed for its solution determine the method of the study. Data collection is an essential part of every research study.

The present study though conducted in the field of information science it is an attempt to study about the application of information technology in the field of higher education

that is conducted through the distance mode of education in Kolkata. The basic research method applied to carry out the study is survey method. The methodology followed for the study is described under the following headings.

1. Variables
2. Tools used for data collection.
3. Samples used for the study.
4. Sampling techniques used.
5. Data collection procedure.
6. Analysis of data.

5.1. Variables

The variables of the study are discussed below:

5.1.1 Variables for the distance learners:

The major variable under study is the application of Information Technology in distance learning process in various Open Universities in Kolkata. Investigator has conducted a detailed survey among the distance learners and faculties of the three sample open Universities, viz. Indira Gandhi National Open University (IGNOU), Mahatma Gandhi Open University (MGOU) and Karnataka State Open University (KSOU).

The following are the classificatory variables used in the case of distance learners.

- 1) University
- 2) Gender
- 3) Level of study
- 4) Subject of study

5.1.2 Variables of faculty members in Open Universities:

The major variable under study is the application of Information Technology in teaching by distance in the open universities in Kolkata. The size of the open universities is taken also as classificatory variable. The investigator has selected one university each from three categories such as large, medium and small. The selected Open Universities or University in Distance Learning is Indira Gandhi National Open University, example for large, Mahatma Gandhi Open University, for medium size and Karnataka State Open University, for small size Open Universities in Kolkata.

5.2. Tools Used For Data Collection

The required data were collected using the following tools constructed by the investigator, with the help of the supervising teacher.

5.2.1 Questionnaire:

A questionnaire consists of a number of questions, printed or typed in a definite order on a form. It is either mailed or given to the respondents. The signal advantage of questionnaire method is that it affords great facilities in collecting data from large, diverse and widely scattered groups of people. Here this tool is used to collect data from distance learners and faculty members of various Open Universities in Kolkata.

5.2.1.1 Questionnaire for distance learners

Investigator has collected the data by directly visiting and distributing questionnaires among the students from the regional head quarters of sample open universities and from different study centers situated nearby the regional head quarters. The questionnaire for distance learners is drafted for different Open Universities considering the methods of learning in different open universities and the extent of Information Technology application in them. The questionnaire is prepared by the investigator with the help of the experts in the field of Information science, to study the existing trend and application of Information Technology in the field of distance education. The questionnaire for the distance learners include the following variables

1. Background characteristics of distance learners
2. Attitude of learners towards distance learning
3. Methods used in learning
4. IT awareness among distance learners
5. Availability of IT tools
6. Current use of IT in learning
7. Distance learning as a global science.
8. Future plan for using Information Technology in practice.
9. Virtual Universities
10. Libraries in distance education

5.2.1.2 Questionnaire for faculty members

The questionnaire for the full time/part time teaching faculty members at the headquarters of the three sample open universities is drafted considering the level and use of application of Information Technology in the process of teaching in distance mode. Investigator has collected data from the teaching faculty members of sample open universities by directly visiting them and distributing questionnaires by hand. The questionnaire for the faculty

members of the open universities was used to obtain information related to use of Information Technology tools in the open universities in their course curriculum. Items gathering data on the personal and professional background of the respondents were also included. The impacts of media on various activities were obtained on five point scale i.e. very good, good, neutral, poor and very poor.

In addition the investigator has employed literature search in the beginning of the study. This is very much useful to get a thorough understanding about the field. Literature includes journal articles collected from Internet, various printed journals, reports and books in the field of Information Technology and distance learning were examined to get a thorough idea about the field of study and its developments.

5.3. Sample Used For The Study

The present study is based primarily on primary data collected from the direct beneficiaries of the system, i.e., the students and teachers. Secondary data are also used wherever necessary. For collecting primary data, students and faculty members of three major providers of distance education in India have been selected:

1. Indira Gandhi National Open University, (Regional H.O. Kolkata).
2. Mahatma Gandhi Open University, (Regional H.O. Kolkata).
3. Karnataka State Open University, (Regional H.O. Kolkata).

Students who underwent courses of study in the above institutions during the period of data collection have been included in the survey. Students of both graduate and postgraduate levels were selected. It is not practical to study the whole population to arrive at generalization through the results of the research for universal application. The process of sampling makes it possible to draw valid inferences or generalization on the basis of careful observation of variables within a relatively small proportion of population. A sample is small proportion of a population selected for the study. In the present study the population is the distance learners and faculty members in the field of distance education in Kolkata. According to the annual report distance learners in the country is more than 15 lakh in the year 2006. In addition there are a number of distance education institutes under regular

universities offering courses under distance stream. Similarly a large number of faculty members are serving the distance education system either directly or indirectly. This population is too large in size to collect data from the entire population. Hence the investigator selected a representative sample of this population to conduct the present study.

5.4. Sampling Techniques Used

The population consists of distance learners and faculty members in the field of distance education in Kolkata. The investigator identified the distance learners and faculty as the first step. They are the learners who came for various purposes to the different open universities taken for the study.

Other sub samples of distance learning were determined as large, medium and small open universities according to their size. The size of the Open University is determined by the number of students registered for different courses at graduate and postgraduate level. The large-scale open universities are those, which have an enrolment of more than one lakh in a year. Medium have an enrolment of more than fifty thousand and small have ten thousand in a year. In order to get representative to all these, the investigator has adopted the stratified random sampling techniques.

5.5. Data Collection Procedure

The investigator first sought permission from different open universities to visit the university by person and as per the permission the investigator visited the institution and distributed questionnaires among students and faculties. After making necessary copies of the tools, the investigator met the students and faculties of sample open universities and distributed questionnaires among them.

Necessary instructions were given for filling the facing sheet of questionnaire. The majority of the students and faculties responded positively by filling up and returned the questionnaires. The responses were encouraging.

6. Analysis Of Data

The data collected have been analyzed using mathematical techniques. Percentages, ratios, and averages are the most common tools applied. The data collected through the questionnaires were divided under major headings such as:

Distance education – Background Information.

Profile of distance learners.

IT awareness of distance learners.

IT application in distance education.

Faculty and IT application.

Virtual Universities and web based learning.

Student support services including the role of libraries.

The data collected through the questionnaires were consolidated separately. Appropriate variables have used for the analysis of data.

7. Scope And Limitations Of The Study

One of the prominent limitations of the study is its reach itself.

IGNOU, MGOU and KSOU are institutions having their presence even in the international education level. The vastness of the land and its diverse population may make degree by which the findings may vary, but the findings are not likely to be different from what has been observed here, if much wider sample had been studied.

Though this study has attempted to cover the entire spectrum of distance education, it needs to be noted that this study does not include all the courses and programs of offered by Distance Education Institutes (DEI) in the country. It is not feasible to conduct a study by covering all the Open Universities in the country, thus the investigator has selected three sample Open Universities such as Indira Gandhi National Open University, Mahatma Gandhi Open University, and Karnataka State Open University for conducting the study. Though the investigator has distributed questionnaires among the entire fulltime faculty members from the sample Open Universities in the country, a large number of counselors from the regular streams teaching in the field of distance education are avoided.

The findings of the study may be useful to administrators and higher education planners at national level and state level for formulating correct policies and strategies with regard to the modernization and application of Information Technology to meet the rising educational needs through the alternative system of education. This will be useful for library and information systems, network experts and managers in designing and implementing highly efficient library and information systems in the field.

The study provides a theoretical and practical explanation for the complex process of modernization and application of Information Technology in the field of distance education. The importance of such a study is very relevant, especially in a country like India where most of the people live in poverty and backwardness. The present study indicates that through lot of efforts are being taken in the field of distance education for the application of Information Technology; the students still follow the conventional techniques of by hearing study materials and attending occasional counseling/ contact classes. Majority of the students are not utilizing the multimedia instruction system introduced in the field of distance education. There are lots of problems relating to the use of Information Technology tools. In order to solve them the entire dependence on the study materials should be minimized and the potential of Information Technology should be utilized to the fullest extent. Moreover the attitude of learners about distance education as a liberal and flexible way of education should be changed. Student support services in the field of distance education should be strengthened. The possibilities in the field of network and satellite technologies should be exploited to the fullest extent. In such a situation only distance education can be developed as an alternative method in the field of higher education in India. The present situation of teaching and learning should be changed so that it can be accessible even to the laymen of the country.

References

1. Kothari, CR. (1990). *Research Methodology: Methods and techniques*. (2nd Ed.) New Delhi: Wiswa Prakashan.
2. Bates, A. W. (1994). *Distance education and educational technology*. In T. Husen and T. N. Postlethwaite (Eds.). *The International Encyclopedia of Education*, (2nd Ed). Oxford: Elsevier Science, 1573-1580.
3. *Chamber's 20th century dictionary*. (1983). Edinburgh: Chambers, 37. Ford, M E (1992). *Motivating Humans: Goals, Emotions and Personal Agency Beliefs*. Newbury Park, CA: Sage Publications.
4. Government of India. (1986). *National Policy on Education*. 1986 – New Delhi: MHRD.
5. Government of India. (1966) *Report of the Education Commission (1964-'66.)* New Delhi: Education and National Development.
6. Harry K. and Khan A. (2000). *The use of technologies in basic education*. In Yates, C. and Bradley, J. (Eds.) *Basic Education at a Distance: World review of distance education and open learning*, 2 (2), 3-21
7. Jones, Steven G. (1998). *Cyber society: revisiting computer mediated communication and community*. London: Sage, 12-46.
8. Khan, I. (1989) *Teaching at a Distance*. Delhi: Amar Prakashan.
9. Kulandai Swamy, V.C. (2002). *Education for Knowledge Era: Open and Flexible Learning*, New Delhi: Kogan, 25-49.
10. Long, T. (1984). Broadcasting for rural development. *Media in Education and Development* 17(1), 17 – 19.
11. Kulandai Swamy.V.C. (1998) Keynote Address In Seminar on Distance
12. *Education*, MIT.
13. Mathew, Raju M. (1998). Role of Information Technology for the sustained development of Kerala: strategies and policies. *Kelpro bulletin*, 2 (1), 3-8.
14. Mathew, Raju. M. (1987). The third world factor. *Transactional data and communication Report*, 10.
15. Mehndiratta, Mamta (1997). *Encyclopaedic dictionary of education*. Vol.2 New Delhi: Sarup and Sons, 475.
16. *Reader's digest Universal Dictionary*. (1993). New York: Reader's Digest, 1210.
17. Sewart, David. (1993) *Individualising support services*. In Daniel, John. S, et al (Eds.) *Learning at a Distance: A World Perspective*. Edmonton: Athabasca University.

Traditional Uses of Medicinal Plants in Treating Snake Bite and Skin Diseases in Chandgad tahsil of Kolhapur District of Maharashtra, India

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DOI- 10.5281/zenodo.7430978

Abstract:

An ethnomedicinal survey was under taken to collect information from local rural people about the use of medicinal plants in Kolhapur district. Local people use certain folklore medicinal plants for the treatment of snake bite and skin diseases. The present paper documents the traditional knowledge of medicinal plant species used to cure snake bite and various types of skin diseases in Kolhapur district. Ethnomedicinal information of medicinal plants was taken from different localities of Kolhapur district by interview with local rural practitioners (vaidya). The knowledge about the medicinal plant has been transmitted orally from generation to generation. The investigation revealed that there are about 10 species of plants used to treat snake bite and 12 species of plants used to cure various types of skin diseases like scabies, psoriasis, eczema, ring worms etc. The medicinal plants used to cure snake bite and skin diseases are enumerated disease wise with botanical name, family, local name, part used and mode of administration. The study indicates that the local inhabitants rely on medicinal plants for treatment. The traditional knowledge of medicinal plants has great potential for research and the discovery of new drugs.

Keywords: Traditional, Snake bite, Skin diseases, Kolhapur District.

Introduction:

Plants have been used in traditional medicine for several thousand years. The knowledge of medicinal plants has been accumulated in the course of many centuries based on different medicinal system such as Ayurveda, Unani and Siddha. In India, it is reported that traditional healers use 2500 plant species and 100 species of plants serves as a regular sources of medicine (Pei, 2001).

During last few decades there has been an increase in the study of medicinal plants and their traditional uses in different parts of the world (Lev, 2006). Herbal remedies are considered the oldest form of health care known to mankind on this earth. Prior to the development of modern medicine the traditional system of medicine that have evolved over the centuries within various communities are still maintained as a great traditional knowledge base in herbal medicines (Mukharjee and Wahli, 2006). Traditionally this treasure of knowledge has been passed on orally from generation to generation without any written document (Perumal Samy and Ignachimuthu, 2000) and is still retained by various indigenous groups around the world. Documenting the indigenous knowledge through ethnomedicinal studies is important for the conservation and utilization of biological resources. Ethnobotanical survey

has been found to be one of the reliable approach to drug discovery (Fabricant and Farnsworth, 2001). Several active compounds have been discovered from plants on the basis of ethnobotanical information and used directly as patented drugs (Carney et al., 1999). It is an urgent need to collect and conserve all ethnobotanical information's from various communities.

Material and Methods:

For gathering information regarding plants used medicinally by rural vaidus several field trips were undertaken in villages of Kolhapur district in different seasons since June 2010. Ethnobotanical data were collected according to the methodology suggested by Jain 1987. Information's (local name, mode of preparation, medicinal uses) were collected through questionnaires, interviews and discussion among rural practitioners (vaidu) in their local language and recorded in field note book. Collected information was cross checked with the help of available literature (Agarwal and Ghosh 1985, Jain 1991, Naik 1998). Specimens were collected from the field and identified with the help of local flora (Yadav and Sardesai 2002). It is our pleasure that each local informant (vaidu) have given us full support for collection details of individual plant species. The study also involved an extensive

literature search and herbarium examination (Jain 1965, Thirumalai et al. 2010, Tiwari and Padhye 1993, Upadhaye et al. 1986)

Observations

The plant species are given below with their Botanic name, Family, Local name, medicinal uses and Administration of disease in table 1.

Result and Discussion:

Present investigation revealed that 10 plant species are used for treatment of snake bite and 11 plant species are used for treatment of various skin diseases. This indicates that rural people of this region possess good knowledge of herbal drugs but their continuous and progressive exposure to modernization may result in extinction of the rich heritage of knowledge in course of time. Plant species used to treat snake bite and skin diseases belongs to family Apocynaceae, Euphorbiaceae, Icacinaceae, Liliaceae, Periplocaceae, Rubiaceae, Rutaceae and Verbenaceae. Observations revealed that the leaf is the most common crude drug in their preparations to cure diseases. Most plants used to treat snake bite and skin diseases were herbs and shrubs. Ethnobotanical data may provide a base to start the search for new compounds related to photochemistry, pharmacology and pharmacognosy. This may provide new source of herbal drugs and help to understand the molecular basis of their activities. Moreover it may further be mentioned that over exploitation of these species in the name of medicine may lead some species ultimately to the disappearance in future. Therefore attention should also be made on exploitation and proper utilization of these medicinal plants.

Acknowledgement:

Authors are cordially grateful to the people inhabiting in different localities of Kolhapur district for their kind support and co-operation during the field survey. Authors are also thankful to University Grant Commission for financial assistance.

References:

1. Agarwal, V. S. and Ghosh, Barin 1985. *Drug plants of India: Root drugs*. Kalyani Publishers, New Delhi.
2. Carney, J.R., Krenishky, J.M., Williamson, R.T., Luo, J., Carlson, T.J., Hsu, V.L. and
- a. Moswa, J.L. 1999. Maprouneacin, a new daphnane diterpenoid with potent antihyperglycemic activity from *Maprounea africana*. *Journal of Natural Products* 62:345-347.
3. Fabricant, D.S. and Farnsworth, N. R. 2001. The value of plants used in traditional medicine
- a. for drugs discovery. *Environmental Health Perspectives* (Supplement) 109:69 - 75.
4. Ignacimuthu, S., Ayyanar, M. and Sankarasivaraman, K. 2006. Ethnobotanical
5. investigations among tribes in Madurai district of Tamilnadu, India. *Journal of Ethnobiology and Ethnomedicine* 2:25.
6. Jain, S. K. 1965. Medicinal plant lore of the Tribal of Bastar. *Economic Botany*. 19: 236-250.
7. Jain, S. K. 1991. *Dictionary of Indian folk medicine and ethnobotany*. Deep Publications.
8. Jain, S. K. New Delhi. 1987. *A Manual of Ethnobotany*. Scientific Publishers, Jodhpur, India.
9. Lev, E. 2006. Ethno-diversity within current ethno-pharmacology as part of Israeli traditional medicine - A review. *Journal of Ethnobiology and Ethnomedicine* 2:4.
10. Mukherjee, P.K. and Wahil, A. 2006. Integrated approaches towards drugs development from Ayurveda and other system of medicine. *Journal of Ethnopharmacology* 103: 25- 35.
11. Naik, V. N. 1998. *Vanaushadhi* (Marathi). Amrut Prakashan, Aurangabad.
12. Pei, S. J., 2001. Ethnobotanical approaches of traditional medicine studies: some experiences
13. from Asia. *Pharmaceutical biology* 39: 74-79.
14. Thirumalai, T., Elumalai, S., and David, E. 2010. Ethnobotanical Survey of Folklore Plants For the Treatment of Jaundice and Snakebites in Vellore districts of Tamilnadu, India. *Ethnobotanical leaflets* 14: 529-536.
15. Tiwari, V. J. Padhye, M. P. 1993. Ethnobotanical study of Gond tribe of Chandrapur and Gadchiroli districts of Maharashtra State, India. *Fitoterapia*, 64: 58-61.

17. Upadhaye, A. S. Kumbhojkar, M. S. and Vartak, V. D. 1986. Observations on wild plants used in folk medicine in the rural areas of the Kolhapur district. *Ancient Sci. Life.* 6(2): 119-121.
18. Yadav, S. R. and Sardesai, M. M. 2002. *Flora of Kolhapur district.* Shivaji University Kolhapur.

Table 1: List of Medicinal Plants with Botanical Name, Family, Local name, Part used and Administration

Sr. No.	Botanical name, Family and Local name	Part used	Administration
❖ Snakebite			
1	<i>Asparagus racemosus</i> Willd. Liliaceae; Shatawari, Shevari	Root	One cup root extract given orally twice a day for fifteen days.
2	<i>Cipadessa baccifera</i> (Roth) Miq. Meliaceae; Narang	Leaf	One glass leaf decoction taken internally twice for one month.
3	<i>Clerodendrum serratum</i> (L.) Verbenaceae; Bharangi	Root	One cup root extract given orally twice a day and root paste applied on bitten area.
4	<i>Gloriosa superba</i> L. Liliaceae; Kal-Lawi	Root tubers	One cup root tuber extract given twice for five days.
5	<i>Hemidesmus indicus</i> (L.) Periplocaceae; Anantmul	Root	One cup root paste taken orally for seven days.
6	<i>Leucas stelligera</i> Wall. Lamiaceae; Shankaroba	Leaf	Two tea spoon juice given with water twice a day and leaf paste applied on bitten area.
7	<i>Lobelia nicotianaefolia</i> Roth. ex R.& S. Lobeliaceae; Ran tambakhu	Leaf	Leaf paste applied on bitten area.
8	<i>Nothapodytes nimmoniana</i> (Grah.) Icacinaceae; Amruta, Narakya	Bark and Leaf	Bark and leaf extract given for seven days.
9	<i>Rauwolfia serpentina</i> (L.) Apocynaceae; Sarpagandha	Leaf	Leaf juice along with <i>Holarrhena pubescence</i> bark juice taken twice a day for seven days
10	<i>Toddalia asiatica</i> (L.) Rutaceae; Jangli mirachi	Leaf	One cup leaf extract given orally three times for seven days.
❖ Skin Diseases			
1	<i>Achyranthus aspera</i> L. Amaranthaceae; Aghada	Leaf	Leaf paste with onion applied over infected part of skin.
2	<i>Ageratum conyzoids</i> L. Asteraceae; Sahdevi	Leaf	Crushed leaves applied on ringworms.
3	<i>Aloe vera</i> (L.) Liliaceae; Korphad	Leaf	Fresh leaf juice applied to cure scabies.
4	<i>Azadirachta indica</i> Juss. Meliaceae; Neem	Leaf	Crushed leaves applied on ringworm.
5	<i>Cassia tora</i> L. Caesalpiniaceae; Takala	Seeds	Seeds ground with butter milk and paste applied over infected skin.
6	<i>Cipadessa baccifera</i> (Roth) Meliaceae; Narang	Root and Leaf	Root and leaf paste applied over infected skin.
7	<i>Clerodendrum serratum</i> (L.) Moon. Verbenaceae; Bharangi	Leaf	Leaf juice applied over infected skin.
8	<i>Euphorbia hirta</i> L. Euphorbiaceae; Dudhali	Leaf	Crushed leaves applied over affected skin.
9	<i>Randia dumetorum</i> Lamk.	Seeds	Fruits rubbed and applied on infected skin.

	Rubiaceae; Gela	and fruits	
10	<i>Toddalia asiatica</i> (L.) Rutaceae; Jangli mirachi	Leaf	Leaf paste applied over infected skin.
11	<i>Vitex negundo</i> L. Verbenaceae ; Nirgundi	Leaf	Leaf juice mixed with leaf juice of <i>Achyranthus aspera</i> and applied over infected part of skin.
12	<i>Woodfordia fruticosa</i> (L.) Kurz. Lythraceae; Dhayati	Leaf	Fresh leaf paste applied on infected part of skin.

Role of nanotechnology in resolving the environmental issues related to air pollution

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DOI- 10.5281/zenodo.7430986

Abstract

Environmental contamination is a serious issue today and recovery of pollutants, such as solids, heavy metals, pesticides, herbicides, fertilizers, oil spills, hazardous gases, organic compounds, industrial effluents, and wastewater, is a topic of extensive research. To rehabilitate the environment, new technologies and nano-materials are being created. Nanotechnology has an impact on a variety of disciplines, including engineering, biology, chemistry, computing, material science, military applications, and communications, in addition to its medical, ethical, mental, legal, and environmental applications. Functional groups can be added to the surface of nanomaterials to impact particular molecules for efficient recovery. Engineering nanomaterials include carbon nanotubes, nanocomposites, quantum dots, fullerenes, quantum wires, and nanofibers. Nanoporous membranes, which may contain nanotubes, are suited for mechanical filtration. The fundamental idea of molecular pollution control is to separate particular elements and molecules from a mixture of atoms and molecules. There are various ways that nanotechnology can be used to reduce air pollution.

Keywords: Air pollution, nanotechnology, nano particles, environment, applications

Introduction

In today's world, environmental contamination is a serious issue. The recovery of pollutants, such as solids, heavy metals, pesticides, herbicides, fertilizers, oil spills, hazardous gases, organic compounds, industrial effluents, and wastewater, is a topic of extensive research into new methods.¹ Because of the complexity of the compound mixture, high volatility, and low reactivity, the capture and degradation of pollutants might be challenging. To rehabilitate the environment, new technologies and nano-materials are being created. Due to the distinctive physical characteristics of its components, such as improved reactivity and efficiency from a larger surface-to-volume ratio than its volumetric equivalents, nanotechnology has attracted a lot of attention. Although nanotechnology provides clear advantages for health care and the environment, it also has the potential to create unexpected consequences that could have a negative impact on the environment, both inside the human body and in the wider ecosystem. Science must assess the environmental and health ramifications while utilizing this new technology for benefits to sustainability, health, and the environment.²

Nanotechnology has an impact on a variety of disciplines, including engineering, biology, chemistry, computing, material

science, military applications, and communications, in addition to its medical, ethical, mental, legal, and environmental applications. Nanotechnology developments might potentially be prepared to offer more sensitive detection systems for monitoring the quality of the air and water, enabling the simultaneous measurement of numerous parameters in real-time response capabilities.³ Industrial emissions are driving the development of metal oxide nano-catalysts, and as a result, titanium oxide nanoparticles' photo-catalytic characteristics are frequently used to create self-cleaning surfaces that reduce pollution. Although relatively little is known at the moment regarding the environmental impact of nanoparticles, it has been demonstrated in some circumstances that chemical composition, size, and shape can influence toxicological consequences, nanotechnology may undoubtedly offer solutions to environmental concerns. Utilizing lightweight, highly durable materials supported by carbon nanotube and metal oxide frameworks as hydrogen storage materials, nanotechnology can help with resource conservation.

Nanotechnology is described as the science of identifying and controlling materials with dimensions ranging from 1 to 100 nm that are used in new technologies due of their distinctive physical

characteristics.⁴ Thus, things smaller than 100 nm are known as nanoparticles. These particles might also have a tubular, spherical, or ad hoc shape. According to their chemical compositions, nanoparticles are split into two groups: natural and artificial nanoparticles. These two groups are then further subdivided into organic and inorganic (mineral) subgroups. Among the naturally occurring nanoparticles are fullerenes and carbon nanotubes having geogenic or pyrogenic origins. Nanostructured electrode materials for enhancing lithium-ion battery performance as well as non-porous silicon and titanium oxide in improved photovoltaic cells are other energy-related uses.

Functional groups can be added to the surface of nanomaterials to impact particular molecules for efficient recovery.⁵ Particularly when creating combinations of several materials and combining the desired properties of each component's efficiency, selectivity, and stability, the deliberate tuning of the size, morphology, porosity, and chemical composition of nanomaterials adds useful characteristics for the purification of toxicants and offers significant advantages over conventional methods of pollution control. The following techniques are employed to remove pollutants from soils, water, and air, including bacteria, pesticides, heavy metals, solvents, and oil, as well as food waste, chlorinated pesticides, and aldehydes, carboxylic acids, and NO_x.⁶ Although Richard Feynman first used the term "nanotechnology" (NT) in his writings in 1959,⁷ it wasn't until the invention of the scanning tunnelling microscope in 1981 that the term came to mean methods describing the creation and/or utilisation of nanoscale structures. Nanomaterials have non-conventional qualities and novel physicochemical traits that enable them to expand their usage in industry, environmental monitoring, health, and promotion of advanced materials and new product development. The created nanomaterials have novel physical, chemical, surface, and optical electronic properties, solve issues that cannot be resolved by conventional technologies, and contribute to the development of creative processes for producing new goods, materials, and chemicals that are highly productive and energy-efficient.

Compared to size-dependent bulk materials, particles with diameters larger than 100 nm exhibit novel characteristics. Engineering nanomaterials include carbon nanotubes, nanocomposites, quantum dots, fullerenes, quantum wires, and nanofibers.⁸ Commercial products include metals, ceramics, polymers, smart textiles, cosmetics, sunscreens, electronics, paints, and varnishes. Natural nanoparticles include erosion dust from volcanoes, wood particles from burning diesel fuel, and combustion products from diesel fuel. Nanomaterials have characteristics that make them more reactive than bulk versions of the same materials due to their high surface-to-volume ratio. For environmental recovery, nanomaterials are categorised into inorganic, carbon, and polymeric categories.

Applications of nanotechnology in environmental issues

It is reasonable to anticipate that nanochemistry will have a significant impact on technologies for wastewater treatment, air purification, and energy storage. Effective filtration processes can be achieved through mechanical or chemical means. One category of filtering methods relies on the application of membranes with appropriate pore sizes, wherein the liquid is forced through the membrane. Nanoporous membranes, which may contain nanotubes, are suited for mechanical filtration with pores as small as 10 nm. This process is known as "nanofiltration." The primary applications of nanofiltration are the elimination of ions or the division of various fluids. Utilizing magnetic separation techniques, magnetic nanoparticles provide an efficient and dependable way to remove heavy metal pollutants from wastewater.⁹ When compared to conventional precipitation and filtering procedures, using nanoscale particles increases the effectiveness of pollutant absorption and is relatively cheap. Additionally, iron nanoparticles have demonstrated promise as a detoxifying agent for removing environmental pollutants from brownfield sites.

Role of Nanotechnology in Pollution Control

Production and consumption of resources, which are currently exceedingly wasteful, lead to pollution. The majority of garbage cannot be recycled efficiently or affordably. Thus, photochemical smog, acid mine drainage, oil slicks, acid rain, and fly ash

continue to be produced by operations like the extraction, transportation, and consumption of petroleum and coal. Stephen Gillett defines the "Promethean Paradigm" in his study for the Foresight Institute as the wasteful reliance on heat for energy since burning fuel wastes a lot of its free energy during the conversion of chemical energy into heat and then to mechanical energy.¹⁰ On the other hand, biological systems effectively oxidise fuel using molecular-scale mechanisms without thermalizing the chemical energy. Reactions at the nanoscale must be under control in order to defeat the Promethean Paradigm.

The fundamental idea of molecular pollution control is to separate particular elements and molecules from a mixture of atoms and molecules. Thermal partitioning, which uses heat to create phase transitions, is the current method for separating atoms. However, both the reagent preparation and the technique itself are expensive and ineffective. The majority of the thermal energy produced by current techniques of energy extraction is squandered during combustion, which also produces undesired byproducts that need to be purified and disposed of properly. The creation of highly specialized, more effective catalysts through nanostructuring could perhaps reduce these exorbitant prices.

Unfortunately, we still haven't figured out the best technique to get the particles in usable form. The potential of nanotechnology is becoming more widely understood. Researchers from the University of Bath received the Brian Mercer Award for Innovation from the Royal Society in 2007 for their work in creating nano-porous fibres¹¹ that trap and extract carbon dioxide together with other impurities and recycle them back into the manufacturing process. Depending on their makeup and how they are spun, these fibres can recycle a variety of gases. Such technique is especially effective for applications with space constraints because to the high surface area typical of nanoscale particles.

Nanotechnology in control of air pollution

One of the biggest issues in the world is air pollution, which is the altering of the atmosphere's natural composition brought about by the introduction of chemical, physical, or biological chemicals that are

being released through anthropogenic, geogenic, or biological sources. The ecosystem (including vegetation and living things) and human health are both negatively impacted by the poor air quality, which may contribute to a number of potentially fatal diseases like cancer, respiratory, and cardiovascular conditions. Global warming, which causes numerous changes in the atmosphere, lands, and water sources all over the planet, is the main cause of outdoor air pollution.¹² Greenhouse gases are thought to be the primary cause of global warming. Carbon dioxide, methane, nitrous oxide, and fluorinated gases are the principal greenhouse gases. Growing human activity is making the GHG emission issue worse. Because most greenhouse gases have a propensity to linger in the atmosphere for hundreds of years, they tend to have enduring long-term effects on climate. Numerous control and treatment systems have been developed to stop, monitor, and reduce the threats that these gases pose to people and the environment. There are various ways that nanotechnology can be used to reduce air pollution.¹³ One way is by using nano-catalysts for gaseous processes that have more surface area. Catalysts function by accelerating chemical reactions that change hazardous vapors from automobiles and industrial facilities into safe gases. Among the catalysts currently in use is one that cleans volatile organic compounds from industrial smokestacks using nanofibers constructed of manganese oxide. There are still more approaches being developed. Nanostructured membranes with pores that are tiny enough to isolate methane or carbon dioxide from exhaust are another method. Carbon nanotubes are being studied by John Zhu of the University of Queensland in order to capture greenhouse gas emissions brought on by coal mining and energy production.¹⁴ CNT can trap gases up to 100 times faster than conventional techniques, making it possible to integrate it into massive industrial and power plants. Contrary to conventional membranes, which can only process or effectively separate large volumes of gas, this innovative technology can process and efficiently separate vast volumes of gas. The compounds that were filtered out still posed a disposal challenge because there are no net gains from taking garbage from the air just to return it to the ground. Japanese

scientists developed a method in 2006 to gather the soot removed from diesel fuel emissions and reuse it as a raw material for CNT production.¹⁵ Through laser vaporisation, the diesel soot is used to create the single-walled CNT filter, effectively turning the filtered

Conclusion

The potential and promise of nanotechnology have been continuously increasing throughout time. This new instrument in the scientific toolkit is being quickly accepted and adapted by the world. Even though there are numerous challenges to solve before this technology can be widely used, science is always improving, developing, and making strides. Many different nanomaterials are applied to environmental restoration. The optimal nanomaterial to reduce or eliminate a specific pollutant relies on the type of pollutant, the accessibility of the recovery site, the volume of material to be recovered, and the recyclable nature of the recovered material. For the elimination of various common pollutants as well as pollutants present in low quantities, traditional cleaning technologies do not provide the most economical solution. In contrast to conventional technologies, nanomaterials have the ability to remove pollutants that are present in low concentrations. Their efficiency can be improved through particle modification, and their cost can be decreased through industrial-scale production and the development of synthesis techniques that use less energy and less expensive raw materials.

References

1. Brusseau, M. L., & Artiola, J. F. (2019). Chemical contaminants. In *Environmental and pollution science* (pp. 175-190). Academic Press.
2. Altieri, M. A. (2002). Agroecology: the science of natural resource management for poor farmers in marginal environments. *Agriculture, ecosystems & environment*, 93(1-3), 1-24.
3. Rickerby, D. G., & Morrison, M. (2007). Nanotechnology and the environment: a European perspective. *Science and Technology of Advanced Materials*, 8(1-2), 19.
4. Nasrollahzadeh, M., Sajadi, S. M., Sajjadi, M., & Issaabadi, Z. (2019). An introduction to nanotechnology.

In *Interface science and technology* (Vol. 28, pp. 1-27). Elsevier.

5. Johnson, A. K., Zawadzka, A. M., Deobald, L. A., Crawford, R. L., & Paszczynski, A. J. (2008). Novel method for immobilization of enzymes to magnetic nanoparticles. *Journal of Nanoparticle Research*, 10(6), 1009-1025.
6. Zheng, C., Zhao, L., Zhou, X., Fu, Z., & Li, A. (2013). Treatment technologies for organic wastewater. *Water treatment*, 11, 250-286.
7. Toumey, C. (2009). Plenty of room, plenty of history. *Nature nanotechnology*, 4(12), 783-784.
8. gamal El-Shamy, A. (2019). Novel hybrid nanocomposite based on Poly (vinyl alcohol)/carbon quantum dots/fullerene (PVA/CQDs/C60) for thermoelectric power applications. *Composites Part B: Engineering*, 174, 106993.
9. Nithya, R., Thirunavukkarasu, A., Sathya, A. B., & Sivashankar, R. (2021). Magnetic materials and magnetic separation of dyes from aqueous solutions: a review. *Environmental Chemistry Letters*, 19(2), 1275-1294.
10. Gillett, S. L. (2002). Nanotechnology: clean energy and resources for the future. *Foresight Institute*.
11. Ondrey, G. (2007). Trapping C [O. sub. 2]. *Chemical Engineering*, 114(3), 14-16.
12. Chopra, R. (2016). Environmental degradation in India: causes and consequences. *International journal of applied environmental sciences*, 11(6), 1593-1601.
13. Mohamed, E. F. (2017). Nanotechnology: future of environmental air pollution control. *Environmental Management and Sustainable Development*, 6(2).
14. Chen, S. J., Zhang, Q., Nguyen, H. D., Ren, Y., Liu, Y., Wang, W., ... & Duan, W. (2022). Direct 2D cement-nanoadditive deposition enabling carbon-neutral hydrogen from natural gas. *Nano Energy*, 107415.
15. Kerdnawee, K., Termvidchakorn, C., Yaisanga, P., Pakchamsai, J., Chookiat, C., Eiad-Ua, A., ... & Charinpanitkul, T. (2017). Present advancement in production of carbon nanotubes and their derivatives from industrial waste with promising applications. *KONA Powder and Particle Journal*, 2017001.

Analysis of Inclusive Practices of Regular Schools for Promoting Inclusive Education

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DOI-10.5281/ZENODO.7430992

Abstract

The term inclusive education entails an approach to imparting education to learners with special needs and including them in the formal education system with other children. In the inclusive method of education, learners with special needs spend their time with those children who do not need any special assistance. The present study was an analysis of the inclusive practices of regular schools for fostering inclusive education. The method adopted was descriptive- survey. The sample selected for the study was teachers, working in different regular Government Schools. The findings of the study reveal that regular schools promote inclusive education by providing essential facilities and adopting suitable inclusive classroom practices.

Key words: Inclusive Education, Regular Schools, Inclusive Practices, Heterogenous Grouping, Co-operative teaching, Collaborative-problem solving.

Introduction

Inclusive education is including children with disabilities in regular classrooms that have been designed for children without disabilities. It refers to an education system that accommodates all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions confronting the school system. Including children with diverse abilities and from diverse backgrounds have to be met by creating child centred pedagogy capable of successfully educating all children. It leads to the development of social skills and better social interactions because learners are exposed to real environment in which they have to interact with other learners each one having unique characteristics, interests, and abilities. The non-disabled peer adopts positive attitudes and actions towards learners with disabilities as a result of studying together in an inclusive classroom. As it is cleared by Article 2, **Salamanca Statement** "*Regular Schools with inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost effectiveness of the entire educational system*". The inclusive education demands reconstructed

educational thinking and practice in regular schools for the benefit of all students.

Inclusive education is a process of extensive provision of equal access to high quality education of children with special educational needs through the organization of education in general educational institutions, using personalized teaching methods and taking consideration of the educational and cognitive activities of children. Education of persons with disabilities should form an integral part of national educational planning, curriculum development and school organization (Rule 6 of the UN Standard Rules for Persons with disabilities.)

Inclusion in education is based on the belief that every child can learn and realize their full potential if provided equal chance to take part in School, supported with resources essential to one's condition and taught in a manner appropriate to one's needs. A child must receive education in an environment that is least restraining and is most conducive to his/her needs. This means that general education is the placement of first choice for all wherein a child with disabilities is with her/his peers without disabilities to the maximum degree possible. Such an education is called Inclusive Education. Throughout the 19th century, children with special needs were institutionalized, separated and carelessly discriminated. The term inclusive education

seemed in the late 1980s as a substitute to special education, to give access to children with special needs coming from diverse background. The implementation of inclusive innovations should include the partnership of School and community, integration of information and communication technologies and creative teaching methods. The prerequisites for the effectiveness of inclusive education are the productivity and self-efficacy of teachers, communication competence of educators, a partnership approach to solving problems that arise in the learning process (Lancaster, 2014). Hence, it is essential to develop a system of education which is competent to cater all the needs, individualities and distinct dissimilarities of all children.

Need and Significance of the Study

Inclusive education system worth the unique contributions of students of all backgrounds bring to the classroom and allow diverse groups to grow side by side, to the benefit of all. Inclusion can be planned in several ways and on different levels, but in the end, the teacher has to deal with a greater diversity within his or her class and has to adjust or prepare the curriculum in such a way that the needs of all pupils, those with Special Educational Needs (SEN), gifted pupils and their peers, are sufficiently met. In short, managing diversity is the key issue in the inclusive class rooms so that children with disabilities should not experience repeated distress but improvement through school with a constant desire for recognition and peer approval (Carrington, 1999). To deal with this diversity in the class, teachers needs inclusive practices. A better understanding of inclusive practices is therefore essential for nurturing, motivating and including children with special educational needs.

Statement of the problem

Inclusive education is a process of increasing the participation of all students in School, including those with disabilities. It is an integral part of the general education system. Inclusion has been used

to refer to the settlement of students with disabilities in ordinary class rooms alongside their peers. The inclusive method of education discards the use of special educational institutions that segregate learners with disabilities from those without disabilities. Inclusive education is the most effective way to give special need children a fair chance to go to school, learn and develop the skills they need to flourish (Corbett, 1999). The classroom environment and classroom practices should be conducive for these children to get the maximum benefit of education. The present study analyses the inclusive practices of regular schools for fostering inclusive education. The study is hence entitled as ***“Analysis of Inclusive Practices of Regular Schools for Promoting Inclusive Education”***.

Objectives

1. To study the facilities provided for inclusive education in regular schools
2. To analyze the classroom practices in regular schools for promoting inclusive education.

Hypotheses

1. The regular schools provide suitable facilities for promoting inclusive education.
2. The classroom practices of the regular schools support inclusive education.

Methodology

Method

The investigator adopted descriptive-survey method for the study as it affords chances for determining the predominant conditions and it is essentially a technique of quantitative description of the characteristics selected for the study. Since the present study aims to analyze the inclusive practices of the regular schools, descriptive survey method was found suitable for the study.

Population

Population of the study involves teachers from different Regular Schools.

Sample

Sample selected for the study involves 80 teachers working in various regular Government Schools of Thiruvananthapuram, Kollam and Kozhikode districts of Kerala.

Tool and Technique used for the Study

1. Questionnaire
2. Interview

The investigator developed a questionnaire consisting of closed and open-ended questions for the teachers to seek the views and preference of inclusive practices. The questionnaire consists of 20 questions related to inclusive practices in the classroom. The investigator conducted an interview with the head of the institutions for collecting details related to the facilities provided for pupils with special educational needs.

Procedure adopted for the study

The survey part of the study is online based. The questionnaire was administered

to the sample through google form. To find the facilities provided for pupils with special educational needs, the investigator conducted an interview with the Head of the institutions of selected schools.

Analysis and Interpretation

Analysis of the data collected by Survey part of the study

The data collected were analyzed by using bi-modal approach. The closed ended questions were analyzed quantitatively by calculating the percentages. The qualitative analysis of the open-ended part of the questionnaire were used for collecting the views of the teachers associated with the inclusive classroom practices.

Table I

Inclusive classroom Practices in Regular Schools

Class room Practices	Number	Percentage
Heterogenous grouping	56	70
Co-operative Teaching	16	20
Collaborative Problem Solving	08	10

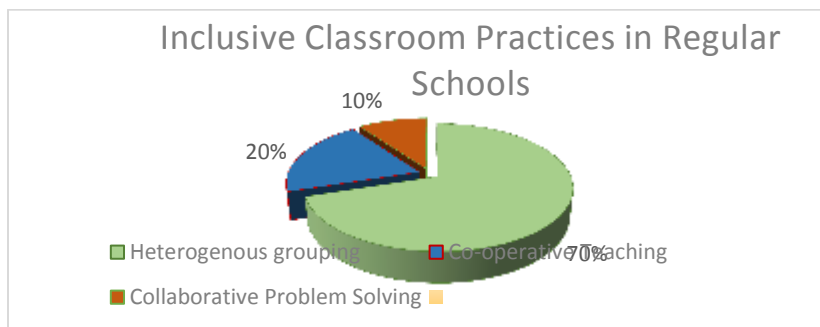


Figure I: Inclusive classroom Practices in Regular Schools

From Table 1, it is clear that 70% of the teachers preferred heterogenous grouping as adaptable class room practice for promoting inclusive education in regular schools whereas 20% of teachers selected co-operative teaching and remaining 10% chosen Collaborative problem solving as suitable classroom practice for inclusive education. Interpretation and explanation of the above-mentioned findings were given below.

Heterogenous Grouping

Planning of co-operative learning activities, lead to divide the classroom into separate groups. Students will have to work together to complete the task in the groups. Heterogenous grouping is effective for inclusive class rooms as it is with diversity of pupils in the class room. Heterogenous grouping is grouping of diverse students by putting them together in the same co-operative learning group. This mixed group may compromise students of varying educational levels, interests, special needs

etc. Students are of approximately the same age but function on different academic, social, and emotional levels. This method of heterogenous grouping allows students to learn from each other. The active interaction with diverse individuals while at the same time sharing their unique abilities and interests will lead the developments of specially needed students. The targeted goals, alternative routes for learning, flexible instruction and the abundance of heterogenous ways of grouping improve inclusive education.

Co-operative Teaching

Teachers need to cooperate with their colleagues within the school and professionals outside the school. The co-operative teaching is an educational approach in which general and special educators work in a coactive and coordinated fashion to jointly teach. It is appropriate and effective for inclusive classroom because of having academically and behaviorally heterogenous students in an educationally integrated setting. The co-operative teaching is effective for the cognitive and affective developments of students. The cooperative teaching is effective, only if the system is flexible and all should recognize the profit of learning and teaching together.

Collaborative Problem-Solving

Teachers want help in including pupils with social and behavioral problems, an organized way of approaching undesired behavior in the classroom is an effective tool for declining the intensity of disorders during teaching. As in the case of inclusive class rooms, dynamic class rules and a set of borders, approved with all students along with appropriate incentives will always be effective.

II. Details of the Interview with the Head of the Schools

Inorder to study the facilities provided for pupils with special educational needs in regular schools, an interview was conducted with the Head of the institutions. Following are the facilities provided in the regular

schools. Transport facilities to the student with disabilities.

The removal of architectural barriers from schools for promoting inclusive education.

The supply of books, uniforms and other materials to pupils with special educational needs attending the schools. The grant of scholarships to differently abled students. Suitable modification in the examination system for the benefit of blind students, hearing impaired and student with low vision.

Reconstructing of curriculam for the benefit of pupils with special educational needs.

Tenability of Hypotheses

The schools using inclusive education will intends to help everyone. Rejoicing diversity, assisting everyone and providing special support of those pupils with special educational needs are their ethics. The hypotheses proposed, **Hypothesis I** -The regular schools provide suitable facilities for promoting inclusive education and **Hypothesis II**- The class room practices of the regular schools support inclusive education, were hence accepted.

Major Findings

The regular schools provide suitable facilities for promoting inclusive education. The class room practices of the regular schools supports inclusive education. Majority (70%) of teachers preferred heterogenous grouping as suitable class room practice for promoting inclusive education in regular schools.

Suggestions

To implement inclusion at regular schools' practice, innovations should be introduced into personnel policy, teacher training, professional development, competence development, in particular the ability to conjoin the educational needs of students. Teachers should accept and appreciate the new educational paradigm, new ways of unifying the educational process, development of educational and methodological provisions, mastering of modern methods and techniques to differentiate personality adapted teaching responsible to the individual needs of the student. A positive constructivist approach

of teachers promotes the effective implementation of inclusive innovations. The positive attitude and insight of inclusion by teachers should be based on the intensity of disability and the educational environment of the learner.

Conclusion

Regular schools must enable children to recognize, comprehend and appreciate other

Reference

1. Avramidis, E., & Norwich, B. (2002). Teachers' attitude towards integration/inclusion: a review of the literature. *European Journal of Special Needs Education*, 17(2), 129-147.
2. Carrington, S. (1999). Inclusion needs a different school culture. *International journal of Inclusive Education*, 3(3), 257-268. <https://doi.org/10.1080/136031199285039>
3. Cole, B.A. (2005). Mission impossible? Special educational needs, inclusion and the reconceptualization of the role of the SENCO in England and Wales. *European journal of Special Needs Education*, 20(3), 287-307. <https://doi.org/10.1080/08856250500156020>
4. Cooc, N., & Kiru., E.W. (2018). Disproportionality in special education: A synthesis of international research and trends. *The journal of Special Education*, 52(3), 163-173. <https://doi.org/10.1177/0022466918772300>
5. Corbett, J. (1999). Inclusive education and School culture. *International Journal of Inclusive Education*, 3(1), 53-61. <https://doi.org/10.1080/136031199285183>
6. Lancaster, J. (2014). School and classroom indicators of inclusive education. *Measuring Inclusive Education (International Perspectives on Inclusive Education)*, 3, 227-245. <https://doi.org/10.1108/S1479-363620140000003027>
7. Lindner, K.T., Alnahdi, G.H., Wahl, S., & Schwab, S. (2019). Perceived differentiation and personalization teaching approaches in inclusive classrooms: Perspectives of students and teachers. *Frontiers in Education*, 4, Article 58. <https://doi.org/10.3389/educ.2019.00058>
8. Tangen, R. (2005). Promoting inclusive education in secondary school in Norway: a national programme for teacher development. *European Journal of Special Needs Education*, 20(1), 57-70. <https://doi.org/10.1080/0885625042000319089>

Financial Resources Management of Savitribai Phule Pune University in Maharashtra: A Critical Analysis **Mrs. Sonam R. More¹ Dr. Ashok D. Wagh²**

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DOI-10.5281/zenodo.7431002

Abstract:

A crucial and necessary resource in educational services is money. The most crucial resource is money, which is transformed into actual teaching materials through a budgeting process and method. The amount of funding allocated to education allows the educational systems to effectively deliver quality education.

The supply of enough funding for the general improvement of educational institutions is a very important duty to improve the quality of education. The purpose of the current study is to examine the funding sources for higher education in India. The majority of the study is based on secondary sources. The data is seen as spanning the years 2012–13 to 2015–16. The grants that Savitribai Phule Pune University has received have been examined through the study.

Keywords: Finance, education, quality education, financial sources, grants

Introduction:

Education is the focal point of each development and is assuming the central part in the steadily changing way of life of person. It is a significant area for monetary, social, and social advancement pointed toward fulfilling the necessities, wants and any desires for a general public overall. Concerning this, United Nation Educational, Scientific and Cultural Organization (UNESCO, 2010) noticed that schooling as a vital opportunity of decision and activity, enabling them to partake in friendly and political existences of their general public, and outfitting them with the expertise they need to foster their occupation. Training assumes an imperative part in building a country and improves the advancement on the loose by creating labor supply to the nations. Without instruction advancement and development is unimaginable and incomprehensible. The fundamental hotspots for the financing of advanced education in India incorporates government reserves, assets of self administering bodies, educational expenses, gifts, grants, instructive cess, etc.

Accordingly, advanced education is considered as one of the main interest in the long term plans of the public authority and among the public level speculations for the improvement of the human culture. However, it is vital to use those monetary assets monetarily and sensibly for come by the normal outcomes from the advanced education area and make it the most splendid

one among the advanced education frameworks of the world.

Higher education in India:

It remained exceptionally internal arranged in spite of a few post-freedom changes in schooling area. As far as number of instructive establishments, India has the world's biggest advanced education framework with around 1,000 colleges and 40,000 universities though it positions third as far as size and variety, however its quality in the worldwide training framework has been horrifyingly beneath its actual potential that stays neglected. India's advanced education framework is the world's third-biggest as far as understudies, close to China and the United States. India's Higher Education area has seen an enormous expansion in the quantity of Universities/University level Institutions and Colleges since autonomy. In the prestigious Quacquarelli Symonds (QS) World University Rankings 2020, only three Indian Universities- IIT-Bombay, IIT-Delhi and IISc (Bangalore)- have been included in the top 200 institutes.

Educational Finance:

Instructive money remembers the idea of speculation for man and its effect lies upon the cycles which are worried about the monetary advancement of the country. Whenever training is considered as a course of interest in more youthful age of the general public, this additionally prompts the satisfaction of future requests expected by the general public from its speculation.

Subsequently, every general public has an assumption for exceptional yields from its use on human and material assets. This course of use on schooling can be perceived as a course of renouncing of present happiness for having an expansion in the progression of profits later on. Thus, we can think about instructive money as a cycle that comprises of pay, use and saving a harmony between the two for the advantage if the general public.

It is said that instructive money is expected to fill various needs prefer to set out new instructive open doors, to keep up with the ordinary instructive administrations, to grow the current instructive offices, to extend the instructive administrations, to diminish in differences in the instructive open doors, to increment in the quantitative parts of training, to increment in the nature of schooling.

Significance of the study:

Advanced education is one of the main pieces of the training framework through which it is relied upon to make learned and useful residents for a country. For the smooth working and quality result from the higher instructive establishments, instructive money is the main component. Subsequently, it is vital to comprehend the course of money in advanced education so we can find out with regards to the consumption on training and potential returns that we can get from that speculation which will signify the accomplishment of the entire advanced education framework.

Objectives of the study:

- To study the different sources of finance in higher education
- To study the grants received by Savitribai Phule Pune University

Hypothesis of the study:

H0: There is no significance difference in grants received by Savitribai Phule Pune University

Savitribai Phule Pune University:

Savitribai Phule Pune University, formerly University of Pune and University of Poona, is a university in Pune in western India, founded in 10 February 1949. Spread over a 411 acres (1.66 km²) campus, the university is home to 43 academic departments. The university is named after Savitribai Phule, a 19th-century Indian social reformer who is known for her contribution towards empowerment and

emancipation of women through education. The university has affiliated colleges, departments, and research institutes, which are primarily in Pune.

Sources of Finance in Higher Education:

RashtriyaUchchatarShikshaAbhiyan:(R USA) RashtriyaUchchatar Shiksha Abhiyan, a centrally sponsored scheme (CSS), launched in 2013 aims at providing strategic funding to eligible state higher educational institutions. RUSA is envisaged as the prime vehicle for strategic funding of state institutions so as to ensure that issues of access, equity and quality are addressed in an equitable manner. All funding under RUSA are norm based and future grants would be performance based and outcome dependent.

Governmental bodies: In India, education is included in the concurrent list i.e. education is considered as the joint responsibility of both center and the state. The government funds are created and distributed through its various agencies like UGC, NCERT, NCTE, NUEPA, AICTE, SCERT etc. The central government of India has been framing several policies and schemes and the state government is required to implement those in every now and then. Apart from that both the central and state government jointly frame enormous schemes to uplift the financial provisions of the students in the form of scholarships, fellowships etc.

Local bodies: In managing education, local bodies also furnish as an important means of financial help whenever necessary. Different local bodies like Zila Parishad, Panchayat Samities, Nagar Panchayats, Gram Panchayats, Municipalities and Corporations etc. are working for the fulfilment of educational goals in the higher educational institutions at the grass root level. **Private funds:** Private assets signifies the assets which are designated through the gifts, memberships, gifts, estates, fines, deal continues, premium on bank adjusts, lease from structures and so forth. These are additionally called public altruism. Private assets for the higher instructive establishments additionally incorporate those foundations which are controlled by the private bodies and subsequently reserves are created through their own pay amassed from different sources.

Grant-in-aid: Grants are given by the public authority or through its different offices to the higher instructive establishments. The monetary assistance or commitment as cash or material merchandise by a greater government to a more modest unit of it is known as an award. These awards might be given a periodical installment or once premise by zeroing in on a particular region under the heads like ordered award, compensatory award, different awards, the debatable and hoc award and so on.

Fees: The fees are collected from the students in return of the tuition or other services provided to them in the educational institution. Fees generally includes admission fees, tuition fees, library fees, examination fees, fees collected for co-curricular activities, laboratory fees, electricity fees etc.

Endowment and land grant: Strict foundations and different associations or NGO's keep to the side a few piece of their gathered cash or pay to spend in instruction and these associations give this measure of cash for the government assistance of instructive organizations and consequently the enriched universities or instructive

Grants received by university:

Following is the data of grants received by Savitribai Phule Pune University from 2012-13 to 2015-16.

Grants/Year	2012-13	2013-14	2014-15	2015-16
State	1409.64	158.42	251.24	237.48
UGC	2333.12	1729.66	1191.6	1460.7
CSIR	155.01	131.25	138.07	135.32
GOI	2675.90	1024.69	1271.48	2229.95
OIB	86.34	132.36	197.87	173.3
Grand Total	6660.01	3176.38	3050.26	4236.75

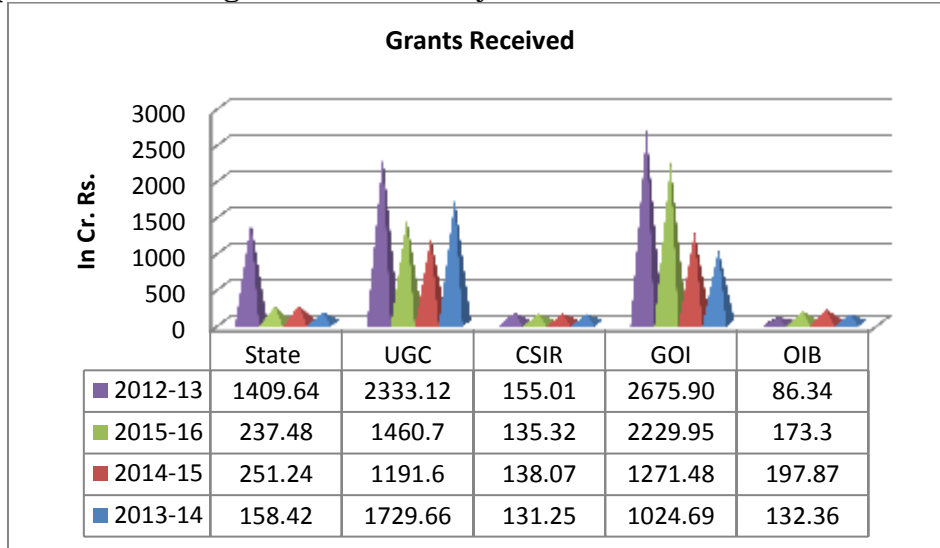
Above table shows the grants received by Savitribai Phule Pune University from 2012-13 to 2015-16. From the table it is observed that State grant is continuously declining. It was 1409.64 in the year of 2012-13 and in 2015-16 it decreased to 237.78. Also the UGC, CSIR, GOI funding is declining only OIB grant is increasing in constant rate. The overall grant from 2012-13 to 2015-16 also declining.

establishments get profited from such gifts. Enrichment reserves, gifts, gifts and other such kind of willful commitments from people or firms, manufacturing plants, sanctuaries, temples and so on are remembered for the pay from blessings for the instructive foundations.

Other Sources of income: The higher educational institutions also generate income from donations, gifts, subscriptions, fines, money from rents, loans, debts. etc. and all these are included in the other sources of income

Income from Alumni Fund: Pay from the graduated class can be of one more conceivable elective kind of revenue for the colleges. Clark (2003, p. 104) determines that pay acquired from graduated class raising money, reserved for long haul general help or to be spent in the present time and place, is a top notch source. Consequently, the college can lay out a decent contact with the graduated class for raising a few assets. Consequently, from all the previously mentioned sources the higher instructive foundations are creating pay for the satisfaction of its various purposes.

Graphical presentation of grants received by Savitribai Phule Pune University:



(Plotted from above table)

Hypothesis Testing:

The hypotheses refers to the basic statements formulated for their confirmation in analysis done in the various chapters of the study, these are the outcomes set before the study

for the conclusion. Students t test have been used for this study.

H0: There is no significance difference in grants received by Savitribai Phule Pune University

Students t test analysis of grants received by Savitribai Phule Pune University

Variable	Value
Average	4280.85
Standard Deviation	1672.98
t-value	3.41
p Value	0.0135

The above table provides the description of grants received by Savitribai Phule Pune University from 2013 to 2026. Since the p-value is less than 0.05 we have sufficient evidence to reject null hypothesis at 5% significance level. So we can reject null hypothesis.

https://www.academia.edu/11285659/Financing_Higher_Education_in_India. Accessed 5 May 2020

Conclusion: There is significant difference in grants received by Savitribai Phule Pune University.

References:

1. Tilak, J.B.G. (1993). Financing higher education in India: principles, practice, and policy issues. High Educ, 26, 43-67. doi: <https://doi.org/10.1007/BF01575106> . Accessed 25 May 2020 Annual Reports of SPPU (2011-2016).
2. Khanal, Kamal Prasad. (n.d.). Financing Higher Education in India. Retrieved from https://www.academia.edu/11285659/Financing_Higher_Education_in_India. Accessed 5 May 2020
3. Khanal, Kamal Prasad. (n.d.). Financing Higher Education in India. Retrieved from

Study of Phytochemical Analysis of *Boerhaavia diffusa* and *Tribulus terrestris* for the Kidney Disorder

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DOI- 10.5281/zenodo.7431013

Abstract:

Plants are rich source of crude drug for therapeutic purpose. The traditional knowledge of these herbal recipes is popular among the indigenous and local communities. While in cities people are lacking behind. Kidney failure is a major problem in now days. A person with less than 10 to 15% kidney function needs to have Dialysis or kidney transplant. *Boerhaavia diffusa* and *Tribulus terrestris*, both are mainly used for treating the disorders of kidneys, some common Bio active compounds are responsible for the curing the kidney disorders. Still 80% of the plants are not characterized as per their phytochemical constituents and thus they are not utilized as per their medicinal value.

Key Words: *Boerhaavia diffusa*, *Tribulus terrestris*, Phytochemical Analysis, Kidney Disorder, natural drug

Introduction:

Boerhaavia diffusa belonging to Nyctaginaceae family, commonly known as 'Punarnava' in the Indian system of Ayurvedic medicine, it is a perennial creeping herb commonly found throughout the waste land of India. This plant is especially useful for treating all the disorders of the kidneys. It also acts as a liver tonic and can be used to treat all the disorders of the liver.

Tribulus terrestris is an annual plants belonging to the family Zygophyllaceae also known as Gokhru in India, has been used as an ancient herb for thousands of years. It has been the most used plant as medicine in

India for ages. People use the fruit, leaf, and root as therapeutic medicine for wide-ranging diseases. *Tribulus terrestris* is an herb that deals with urinary tract infection and kidney problems. It is famous for its diuretic properties also.

Rationale of the study:

The findings of the chemical constituents from plants would provide the basis for developing the new lead molecules in favour of natural product drug discovery, which is beneficial to pharmaceutical point of view. Application of same will also helpful to Ayurveda, Homeopathy and Tissue culture.

Table I: Ethnomedical uses of *Boerhaavia diffusa* by various countries

Name of the Country	Ethnomedical uses
Brazil	for albuminuria, beri-beri, bile insufficiency, cystitis, edema, gallbladder problems, gallstones, gonorrhoea, guinea worms, hepatitis, hypertension, jaundice, kidney disorders, kidney stones, liver disorders, liver support, nephritis, renal disorders, sclerosis (liver), snakebite, spleen (enlarged), urinary disorders, urinary retention
Guatemala	for erysipelas, guinea worms
India	for abdominal pain, anemia, ascites, asthma, blood purification, cancer, cataracts, childbirth, cholera, constipation, cough, debility, digestive sluggishness, dropsy, dyspepsia, edema, eye problems, fever, gonorrhoea, guinea worms, heart ailments, heart disease, hemorrhages (childbirth), hemorrhages (thoracic), hemorrhoids, inflammation (internal), internal parasites, jaundice, kidney disorders, kidney stones, lactation aid, liver disorders, liver support, menstrual disorders, renal insufficiency, rheumatism, snakebite, spleen (enlarged), urinary disorders, weakness, and as a diuretic and expectorant
Iran	for edema, gonorrhoea, hives, intestinal gas, jaundice, joint pain, lumbago, nephritis, and as an appetite stimulant, diuretic and expectorant
Nigeria	for abscesses, asthma, boils, convulsions, epilepsy, fever, guinea worms, and as an expectorant and laxative
West Africa	for abortion, guinea worms, menstrual irregularities, and as an aphrodisiac
Philippines	Diuretic, fever, purgative and vermifuge
Ghana	Asthma and Boils
Elsewhere	for childbirth, guinea worms, jaundice, sterility, yaws

Objectives:

The following are the objectives of Research:

1. To find out the Secondary metabolites from *Boerhaavia diffusa* and *Tribulus terrestris*.
2. To check the presence of the common bioactive compounds from *Boerhaavia diffusa* and *Tribulus terrestris*.
3. Analysis of those bioactive compounds.
4. To cultivate both the plants to get maximum Secondary metabolites for further study.

The findings of the chemical constituents from plants would provide the basis for developing the new lead molecules in favor of natural product drug discovery, which is beneficial to pharmaceutical point of view. Application of same will also helpful to Ayurveda, Homeopathy and Tissue culture.

Hypothesis:

The further advances of this project can help us get the common bioactive compounds in bulk amount for making highly efficient natural drug so as to get quick remedies and relief to kidney patients. Artificial cultivation can also be done where soil is not favourable for the growth of the plant. Further the common bioactive compounds can be obtained in larger quantity by controlling soil condition, which will helpful for researchers in finding a highly efficient natural drug for kidney patients without any side effects.

Methods & Materials:

Work plan:

Methodology: Solvent Extraction

Extraction is the separation of medicinally active parts of plant tissues using selective solvents through standard process. These plant based constituents can be derived from

any part of the plant like bark, leaves, flowers, roots, fruits, seeds, etc.

Collection and preparation of plant materials:

Whole plant of *Boerhaavia diffusa* and *Tribulus terrestris* were collected. The dried plant samples are ground to fine powder with mortar and pestle. The main purpose of drying is to remove the water content from plants so that the plants can be stored. Plants need to be dried immediately as soon as the plants collection finish otherwise this it will leads to spoilage of plant materials. Powder extracted using Methanol by Plant tissue homogenization.

Collection of Plants Cleaning and Drying of Plants

The leaves of the *Tribulus terrestris* were collected from, Moletha, Vadodara , Gujarat , India and brought to laboratory. Plant parts leaves were cleaned by washing with distilled water to remove dust, and other contaminants. The leaves were shade dried into laboratory at room temperature at 30°C for 10 days. The dried leaves were grounded to make fine powder. Powder of samples were kept in air tight containers.

The leaves of the *Boerhaavia diffusa* were collected from, Rayasan, Gandhinagar, Gujarat , India and brought to laboratory. Plant parts leaves were cleaned by washing with distilled water to remove dust, and other contaminants. The leaves were shade dried into laboratory at room temperature at 30°C for 10 days. The dried leaves were grounded to make fine powder. Powdered samples were kept in air tight containers.



Fig. I -*Boerhaavia diffusa*

Each dried plant sample was ground and extracted with methanol. 20 gm of powder was soaked into 200 ml of methanol. The extraction process was carried out for 48 hours at room temperature on orbital shaker.

Tribulus terrestris

Methods of Extraction

Plant Tissue Homogenization

Plant tissue homogenization in solvent has been used by many researchers. Dried or wet, fresh parts of plant are grinded in a blender

to fine particles, add in a certain quantity of solvent and shaken vigorously for 5 - 10 min or left for 24 hrs after which the extract is filtered through the define process. The filtrate then dried under reduced pressure and re-dissolved in the mentioned solvent to determine the concentration of solution. Some researchers however centrifuged the filtrate for better clarification of the plant extract. Addition of water to alcohol improves extraction rate significantly, methanol is the best solvent for polyphenol extraction

Phytochemical screening:

Phytochemical examinations were carried out for the plant - extracts as per the standard methods.

Detection of alkaloids: Plant -Extracts were dissolved individually in dil. Hydrochloric acid and filtered by define process.

a) Mayer's Test: Test - Plant -Extracts were treated with Mayer's reagent (Potassium Mercuric Iodide). Formation of a yellow coloured precipitate indicates the presence of alkaloids in a plant .

b)Wagner's Test: Plant -Extracts were treated with Wagner's reagent (Iodine in Potassium Iodide). Formation of brown or reddish precipitate indicates the presence of alkaloids in a plant extract.

c)Dragendroff's Test: Plant -Extracts were treated with Dragendroff's reagent (solution of Potassium Bismuth Iodide). Formation of red precipitate shows the presence of alkaloids.

d)Hager's Test: Plant -Extracts were treated with Hager's reagent (saturated picric acid solution). Presence of alkaloids confirmed by the formation of yellow coloured precipitate in a solution.

2. Detection of glycosides: Plant -Extracts were hydrolysed with dilute HCl, and then used to test for glycosides.

a) Modified Borntrager's Test: Plant -Extracts were treated with Ferric Chloride solution and keep in boiling water for about 5 minutes. The mixture was cooled and then extracted with equal volumes of benzene. The benzene layer was taken out and treated with ammonia solution. Formation of rose-pink colour with the ammonical layer indicates the presence of anthranol glycosides.

Legal's Test: Plant -Extracts were treated with sodium nitropruside in pyridine and sodium hydroxide solution. Formation of pink to blood red colour shows the presence of cardiac glycosides.

3. Detection of saponins

a) Froth Test: Plant -Extracts were diluted with distilled water to make 20ml and this was shaken in a graduated cylinder for around 15 minutes. Formation of 1 cm layer of foam in the solution indicates the presence of saponins.

b) Foam Test: 0.5 gm of plant -extracts was shaken with 2 ml of water. If foam produced remains for ten minutes it indicates the presence of saponins.

4. Detection of phenols

Ferric Chloride Test: Plant -Extracts were treated with 3-4 drops of ferric chloride solution. Formation of bluish black colour shows the presence of phenols in a solution.

5. Detection of tannins

Gelatin Test: To the plant - extract, 1% gelatin solution containing sodium chloride was added. Formation of white precipitate shows the presence of tannins in a solution.

6. Detection of flavonoids

a) Alkaline Reagent Test: Plant -Extracts were treated with few drops of sodium hydroxide solution. Formation of intense yellow colour, which becomes colourless on addition of dilute acid, shows the presence of flavonoids in a solution.

b) *Lead* acetate Test: Plant -Extracts were treated with few drops of lead acetate solution. Formation of yellow colour precipitate shows the presence of flavonoids in a solution.

7. Detection of diterpenes

Copper acetate Test: Plant -Extracts were dissolved in water and treated with 3-4 drops of copper acetate solution. Formation of emerald green colour shows the presence of diterpenes in a solution.

Observation & Result:

Phytochemical screening: Phytochemical screening of *Borehaaviadiffusa* powder revealed the presence of flavonoids, alkaloids;coumarins, tannins, while glycosides steroids , and saponins were absent.

Table: II Alcoholic Extraction of *Borehaavia diffusa*

Sr. No.	Test of Phytochemicals	Alcoholic Extraction of <i>Borehaaviadiffusa</i> (Methanol)
1	Alkaloids	+
2	Glycosides	-
3	Saponins	-
4	Phenols	+
5	Tannins	+
6	Flavonoids	+
7	Triterpenoids	+
8	Steroids	-
9	Coumarins	+
(Present: +, Absent: -)		

Table: III Alcoholic Extraction of *Tribulus terrestris*

Sr. No.	Test of Phytochemicals	Leaves Extracts of <i>Tribulus terrestris</i> (Methanol)
1	Alkaloids	+
2	Glycosides	+
3	Saponins	+
4	Phenols	+
5	Tannins	+
6	Flavonoids	+
7	Terpenoids	+
(Present: +, Absent: -)		

Conclusion:

Boerhaavia diffusa and *Tribulus terrestris*, both are mainly used for treating the disorders of kidneys, some common Bio active compounds are responsible for the curing the kidney disorders. Phytochemical screening of Secondary metabolites of both the plants will be helpful to find out the common of Phytochemical compounds. By controlling the soil conditions bioactive compounds can be obtained in larger quantity, which will helpful for further researchers in finding a highly efficient natural drug for kidney patients without any side effects. Instead of going for Dialysis or kidney transplant people can have efficient drug for better recovery.

Suggestions:

Boerhaavia diffusa and *Tribulus terrestris*, both are mainly used for treating the disorders of kidneys, some common Bio active compounds are responsible for the curing the kidney disorders. Phytochemical screening of Secondary metabolites of both the plants will be helpful to find out the common of Phytochemical compounds. By controlling the soil conditions bioactive compounds can be obtained in larger quantity, which will helpful for further researchers in finding a

highly efficient natural drug for kidney patients without any side effects. Instead of going for Dialysis or kidney transplant people can have efficient drug for beer recovery.

References:

1. Apu, A. S., Liza, M. S., Jamaluddin, A. T. M., Howlader, M. A., Saha, R. K., Rizwan, F., & Nasrin, N. (2012). Phytochemical screening and in vitro bioactivities of the extracts of aerial part of *Boerhaviadiffusa* Linn. *Asian Pacific journal of tropical biomedicine*, 2(9), 673-678.
2. Akram, M., Asif, H. M., Akhtar, N., Shah, P. A., Uzair, M. U. H. A. M. M. A. D., Shaheen, G., ... & Ahmad, K. (2011). *Tribulus terrestris* Linn.: a review article. *J Med Plants Res*, 5(16), 3601-3605.
3. Banu, K. S., & Cathrine, L. (2015). General techniques involved in phytochemical analysis. *International journal of advanced research in chemical science*, 2(4), 25-32.
4. Dwivedi, D., & Sengar, N. (2018). Investigation of phytochemical constituents from *Tribulus terrestris* roots, leaves and fruits. *Journal of Chemistry and Chemical Sciences*, 8, 55-58.

5. International Journal of Advanced Research in Chemical Science (IJARCS) Volume 2, Issue 4, April 2015, PP 25-32. ISSN 2349-039X (Print) & ISSN 2349-0403 (Online) [screening methods in the study of fungicidal property of medicinal plants.pdf](#)
6. Nayak, P., &Thirunavoukkarasu, M. (2016). A review of the plant Boerhaavia diffusa: its chemistry, pharmacology and therapeutical potential. J. Phytopharmacol, 5(2), 83-92.
7. Singhal, H. K., & Sharma, R. S. Ayurvedic Management of Acute Pancreatitis-A Case Report, May-2015 International Ayurvedic Medical Journal ISSN: 2320 5091.
8. Shisode, K. S., &Kareppa, B. M. (2011). In-vitro antioxidant activity and phytochemical studies of Boerhaavia diffusalinn. roots. International Journal of Pharmaceutical Sciences And Research, 2(12), 3171.
9. Smitha Grace S. R*, JyotiBala Chauhan and ChaithraRatnakar Jain. Preliminary Phytochemical Investigation and TLC Analysis of Peel And Seed Extracts of *Perseaamericana*. Asian Journal of Pharmaceutical Science & Technology. e-ISSN: 2248 – 9185. Print ISSN: 2248 – 9177. Vol 5|Issue 3| 2015|167-171.
10. Pandey, A., &Tripathi, S. (2014). Concept of standardization, extraction and pre phytochemical screening strategies for herbal drug. Journal of Pharmacognosy and Phytochemistry, 2(5).
11. Prashant, T., Bimlesh, K., Mandeep, K., Gurpreet, K., &Harleen, K. (2011). Phytochemical screening and extraction: A review. Internationale pharmaceuticasciencia, 1(1), 98-106.
12. VasaitRajendrabhai, D. (2017). Detection of phytochemical and pharmacological properties of crude extracts of Tribulus terrestris collected from tribal regions of Baglan (MS), India. Int J PharmacognosyPhytochem Res, 9(4), 508-511.
13. <https://trenos.hedbergandson.com/does-punarnava-increase-blood-pressure>
14. <https://www.rxlist.com/tribulus/supplements.htm>
15. <https://cdn.intechopen.com/pdfs/26025/intech>

People Power And Alternative Politics

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DOI- 10.5281/zenodo.7431025

Abstract

In the developing world over the last few decades people power' movements emerged to challenge the 'authoritarian logic' of undemocratic regimes as well as the dominant 'development logic' promoted by the Governments of developed countries international economic institutions, and multinational corporations. This article looks at people power movements that challenged political authoritarianism in the Philippines and Myanmar, and people power movements that challenge development policies in India. Thailand, and Brail. It explains how these social movements mobilise people and generate pressure for social change. 'For pragmatic or principled reasons, people power movements incorporate methods of non-violent action in struggles against Governments, large landowners, and corporations. Drawing on environmentalist, sustainable development discourses, they promote democratization and alternative visions of development.

Key words- Social movements, people power movement, divergent outcomes.

Introduction

In many parts of the developing world, grass-roots movements have emerged as a political force to be reckoned with. People excluded from politics are increasingly engaging in organized collective action to defend their livelihoods, promote a more equitable distribution of land and resources, challenge state and corporate-driven development policies, and advance democratization. From the 1980s onward, citizens in numerous authoritarian regimes mobilized campaigns of non-violent resistance to challenge the entrenched political elite and promote democratization (Schock 2005). Marginalized peoples suffering from negative consequences of the 'development project' and the **globalization** project of **neo-liberalism** (McMichael 2008) struggle against deforestation, over-fishing, industrial and export agriculture, large dam projects, and increasing land inequality. Furthermore, resistance is mobilized against neo-liberal economic policies and the 'new enclosures' (Harvey 2003; Shiva 2005), such as the privatization of public utilities and resources, and an intellectual property rights regime that contributes to the **privatization** and **commodification** of resources and traditional knowledge of peasants and indigenous peoples.

Social Movements And People Power

Social movements are collective, organized and sustained efforts to promote social change that occur partially or entirely outside conventional politics. Their participants are often drawn from marginalized segments of Society that are excluded from decision-making processes. Thus, they must engage in

extra-institutional methods of political action to exert political influence. These methods may be violent, non-violent, or a combination of the two.

Examples Of Non-Violent Actionist

Protest and persuasion
Protest demonstrations
Marches
Political rallies
Public speeches
Declarations
Vigils

People Power Movements And Democratization

People power movements have contributed to democratization in some parts of the developing world, including South America (Bolivia, Brazil, Uruguay, Chile and Peru), the Caribbeans (Haiti), Africa (Sudan, Benin, South Africa, Mali, Madagascar, and Nigeria), Asia (Philippines, South Korea, Taiwan, Bangladesh, Nepal, Thailand, Mongolia, and Indonesia), the Middle East (Lebanon), and the former Soviet Union (Georgia, Ukraine, and Fyrgyzstan). In some of these countries democracy took root; others subsequently experienced democratization and a slide back to overt authoritarianism. Comparable pro-democracy movements in other places failed to promote democratization, Pakistan, Myanmar, Tibet, and China were brutally crushed. Below, two pro-democracy people power movements are discussed: a successful one (the Philippines) and an unsuccessful one (Myanmar).

Myanmar: The 8-8-88 Pro-Democracy Movement

Myanmar has been ruled by a military dictatorship since 1962, when General Ne Win assumed power in a coup against the democratic regime of U Nu. The alleged justification for the military takeover included a perceived turning away from the state's founding socialist principles, U Nu's policy of establishing Buddhism as the state religion, and his negotiations with leaders of non-Burman states for greater autonomy, inviting attempts to exercise their constitutional right to secede. Upon declaring martial law, Ne Win expanded the role of the military in the polity economy. The Burma Socialist Programme Party (BSPP) was formed as a means of mass mobilization and political indoctrination. All other political parties were banned and potential political rivals were eliminated. The result has been gross inefficiency, rampant corruption, and economic decline.

Divergent Outcomes

What accounts for the divergent outcomes of the two pro-democracy people power movements? Characteristics of the movements themselves as well as the political context each played a role (Schock 1999; 2005). In the Philippines, two broad-based organizations emerged to coordinate the unarmed struggle against Marcos, namely Baya (Bagong Alyansang Makabayan) and the United Democratic Opposition (UNIDO). Bayan acted as an umbrella organization, coordinating the activities of a diverse array of progressive organizations promoting the interest of women, peasants, and workers. UNIDO, representing the traditional political elite opposition and its middle-class followers, acted as both a political party and a social movement organization, engaging in both non-violent action and electoral activity. Both strands of the anti-Marcos challenge implemented varied non-violent actions and responded innovatively to Government repression. General strikes, civil disobedience, and the rejection of the official election results undermined the state's power and legitimacy. These actions, along with the growing armed communist insurgency in the countryside, promote capital flight, contributed to sever ties to Marcos and throw its weight behind Corazon Aquino.

India: Ekta Parishad²

A variety of social movements in India address issues related to the control over and access to land and natural resources, including movements concerned with bio piracy, deforestation, dam building, indigenous people's rights, land reform, and agricultural policy. Ekta Parishad (Unity Forum), a Gandhian land rights organization of founded in 1990, struggles to prevent land alienation and to promote the access of marginalized people to livelihood natural resources. Its members are drawn from the most disadvantaged segments of society, such as lower-caste farmers and rural workers and adivasis. Adivasis are indigenous tribal peoples in India who traditionally inhabit forestland.

Thailand: Assembly Of The Poor³

The Assembly of the Poor (Samatcha khon chon) is composed of various groups adversely affected by development policies implemented by the Thai state to promote industrialization, export-oriented agriculture, and commercial forestry. A substantial promotion come from the hundreds of thousands of rural and forest-dwelling people who have been adversely affected by the construction of large-scale dams, which have caused the loss of fisheries and the flooding of land upon which people depend for their livelihoods. The government has often failed to adequately compensate displaced people for their losses.

Brazil: The Landless Rural Workers' Movement (Mst)

Brazil has one of the highest levels of lands inequality in the world, a legacy of Portuguese colonization and the continued political influence of the land owning elite. The 1964 and statute Act and the 1988 Brazilian Constitution specify that the government has the responsibility to redistribute land that is not being productively used, but no serious land reform programme has been implemented. In fact a progressive government that was considering land reforms was removed by a US government-backed military coup in 1964. From the 1970s onward, the number of landless people and unemployed rural workers increased due to the building of several hydroelectric dams, the expansion of large industrial farms for export agriculture, and the implementation of policies favouring

large-scale farming and contributing to the indebtedness of small farmers. Disillusioned peasants began taking over unproductively used land through unarmed land occupations. Further land occupations were subsequently organized by the Landless Rural Workers' Movement, or the MST (Movement of dos Trabalhadores Rurais Sem Terra), a social movement organization that was officially founded in 1984. The MST originated in Brazil's southern most states, Rio Grande do Sul, Santa Catarina and Parana, growing out of a network of progressive members of the Catholic Church who practised **liberation theology** and Marxist activists concerned with rural violence and inequality.

Politics Of Alternative Development

The development policies implemented by many developing countries over the past half-century have prioritized constructing large dams, promoting industrial farming and export-oriented agriculture, and extracting timber and minerals. These policies have contributed to the displacement of people, the privatization of communal land and resources, increasing level of land inequality, and environmental degradation. They have threatened the material bases of small farmers, landless rural workers, and indigenous peoples. In response, social movements with strong critiques of the dominant models of development have mobilized and pursued goals consistent with environmentalism, sustainable development, and grass-roots democracy. Social movements, like those discussed above, not only resist destructive policies. They also challenge entrenched systems of inequality and traditional rural social relations such as authoritarianism, violence, and patriarchy, with traditional caste relations in India and traditional patron-client in both Thailand and Brazil being good examples. All three organizations promote gender equality and empower people to take a stand against corruption, violence, and traditional deference to authority.

Conclusion

From the 1980s onward, a wave of people power movements challenged authoritarian regimes throughout the developing world. Many movements contributed to human rights and democratization. Less dramatically, but perhaps more importantly, people power movements have also emerged

through the developing world to challenge the dominant development logic and neo-liberal economic policies. Drawing on human rights, environmentalism, and sustainable development discourses, these movements are increasingly becoming linked through transnational networks.

References:

1. Harvey, D.(2003), *The New Imperialism*(Oxford: Oxford University Press)
2. Khagram, S.(2004), *Dams and Development: Transnational Struggles for Water and Power*(Ithaca, Ny: Cornell University Press).
3. McMichael, P. (2008), *Development and Social Change: A global Perspective*, 4th edn (Thousand Oaks, CA: Pine Forge Press).
4. Martin, B.(2001), *Non-violence versus Capitalism*(London: War Resisters' International).
5. O'Brien, R., Goetz, A. M. Scholte, J.A., and Williams, M. (2000) *Contesting Global Governance: Multilateral Economic Institutions and Global Social Movements* (New York/Cambridge: Cambridge University Press)

Web Links

1. www.ektaparishad.com Ekta Parishad, Bhopal, India; contains information about the history and activities of India's Ekta Parishad (unity forum).
2. www.mst.org.br Movimento dos Trabalhadores Rurais Sem Terra, Sao Paulo, Brazil; contains information about the history and activities of Brazil's MST.

Crop Insurance in India: A Study of PMFBY

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DOI-10.5281/zenodo.7431032

Abstract:-

More than one-third of the world's undernourished children live in India, which ranks 101th out of 116 countries in the Global Hunger Index 2021. Agriculture is a risky business due to production insecurity and market risks, which affect farmers' income levels and, as a result, food security. The purpose of this review was to comprehend the various features of various crop insurance policies in India as well as to investigate the effects of the Pradhan Mantri Fasal Bima Yojana (PMFBY) on Indian farmers. In terms of the number of farmers insured, the area insured, claims paid, and total farmers benefited, agricultural insurance coverage under PMFBY has remained low. The PMFBY had significantly lower beneficiary and claim premium ratios when compared to other schemes. Farmers' premiums have a significant effect on the number of farmers insured over time, according to the multiple regression analysis, but subsidies have no effect on farmers' insurance participation. The PMFBY's major flaws are claim settlement delays, system complexity, and farmer apathy. Farmers may become more aware of these programmes if they use digital media more frequently.

Keywords:- PMFBY, Agriculture, Kharif, Government, Food Security, Financing Schemes.

Introduction:-

More than one-third of the world's undernourished children live in India, which ranks 101th out of 116 countries in the Global Hunger Index 2021 study (Global Hunger Index 2021). Agriculture is a risky business due to insecurity in production and market risks, both of which have a direct impact on farmers' income levels. Rainfed agriculture's dominance raises the riskiness of agriculture, which supports 58% of the Indian population (India Brand Equity Foundation (IBEF) 2021). Food security, according to the United Nations Committee on World Food Security, means that all people have physical, social, and economic access to enough, safe, and nutritious food to meet their food preferences and dietary needs for an active and healthy life (IFPRI 2021). Climate change, global population growth, rising food prices, and other environmental stressors are all expected to have an impact in the coming decades. Crop insurance can help farmers protect themselves against income volatility. Since independence, efforts have been made at both the national and state levels to implement a crop insurance scheme for Indian farmers. In 1972, the first crop insurance pilot programme with limited coverage began. The Pilot Crop Insurance Scheme took its place in 1978. The Comprehensive Crop Insurance Scheme, the first nationwide crop insurance scheme based on the area approach, was implemented in 1985.

The scheme was replaced in 1999 by the National Agriculture Insurance Scheme, later renamed the Modified National Agriculture Insurance Scheme. Aside from these programmes, the Indian government has launched a number of crop insurance pilot projects and programmes, such as the Crop Insurance Pilot Scheme (2000), the Farm Insurance Scheme (2003), and the Weather-Based Crop Insurance Scheme (2007). Insurance policies have been altered numerous times in order to improve results in terms of claims, premium rates, and other factors. The two crop insurance schemes currently in operation are the Pradhan Mantri Fasal Bima Yojana and the Restricted Weather-Based Crop Insurance Scheme.

The 'Pradhan Mantri Fasal Bima Yojana' was launched by the Government of India in kharif 2016, replacing previous schemes such as the National Agriculture Insurance Scheme (NAIS) and Modified National Agriculture Insurance Scheme (MNAIS). An "area approach" was used in the insurance scheme. Until kharif 2020, when it was made optional for loanee farmers, the scheme was mandatory for farmers who took a loan from any financial source and voluntary for non-loanee farmers. The scheme was implemented by a number of public and private insurance companies, but it was overseen by the Government of India's Ministry of Agriculture and Farmers' Welfare. The "Restructured Weather-Based

Crop Insurance Scheme" has replaced the "Weather-Based Crop Insurance Scheme."

Pradhan Mantri Fasal Bima Yojana

The Pradhan Mantri Fasal Bima Yojana (PMFBY) was revamped in 2016, with an initial allocation of Rs. 5500 crores in the 2016-2017 union budget. This scheme offers a comprehensive risk solution at India's lowest uniform premium rate. Other crop insurance schemes, such as the National Agriculture Insurance Scheme and the Modified National Agriculture Insurance Scheme, which had flaws, have been replaced by this scheme. The insurance scheme is divided into regions. All farmers are covered by the programme, including loanees, non-loanees, tenants, and sharecroppers. The scheme, which was initially mandatory for loanee farmers who had taken a loan from any financial institution and voluntary for non-loanee farmers, was made optional for loanee farmers beginning in kharif 2020. (Indian Government, 2020) The scheme is implemented by a number of public and private insurance companies under the supervision of the Ministry of Agriculture and Farmers' Welfare. This scheme's main selling point is "one premium, one season." It addresses agricultural risks from pre-sowing to post-harvest and encourages the use of modern techniques for accurate crop yield and loss measurement, such as global positioning systems (GPS), remote sensing, smartphones, and drones, to facilitate and expedite claim settlement. All kharif and rabi crops, as well as annual horticultural and commercial crops, are covered by the scheme. Farmers pay a uniform premium rate of 2.0% for kharif crops, 1.50% for rabi crops, and 5.0% for annual horticultural and commercial crops, with the remainder split evenly between the federal and state governments. After the scheme was first implemented, several changes were made to broaden its coverage in terms of both the number of farmers and the area covered. Table 2 summarises the major changes implemented by the government thus far. The new crop insurance portal, www.agriinsurance.gov.in, was launched in 2017-2018, and a second crop insurance portal, www.pmfby.gov.in, was launched in 2018-2019 for all states. This scheme has made the Aadhar card mandatory since 2017-2018. The scheme covered crop losses caused by wild animals in 2018-2019. The Indian government

implemented changes recommended by various policymakers, including: voluntary participation of all farmers; business allocation to insurance companies for three years rather than one, from 2016-2017 to 2019-2020; limited premium subsidies (i.e., 30% for unirrigated areas and 25% for irrigated areas); an increase in the premium subsidy from 50% to 90% for northeastern states; and fixed claim cut-off dates (i.e., 0.5 percent of the total premium to be spent on information and education).

Conclusion:-

Since independence, the Indian government has launched a number of crop insurance schemes to help farmers maintain their income levels. There are currently two crop insurance schemes in operation in India: the Pradhan Mantri Fasal Bima Yojana (PMFBY) and the Restructured Weather-Based Crop Insurance Scheme (RWBCIS). In comparison to previous schemes, the PMFBY has modified the following features: coverage of all kharif and rabi seasons, as well as all annual commercial and horticultural crops; risks covered from pre-sowing to post-harvesting; use of modern crop loss assessment technology, such as drones and GPS; and claims paid directly into farmers' accounts. There are three indemnity levels available: 70%, 80%, and 90%. Some new features have been added to make it more successful and farmer-friendly, such as voluntary participation for all farmers, business allocation to insurance companies for three years instead of one, linking with the Aadhaar card, mandatory requirements for states to pay subsidies on time, and flexibility for states to decide on additional risk coverage. However, we discovered that PMFBY had limited success between 2016-2017 and 2017-2018.

In addition, we discovered that agriculture insurance coverage under PMFBY remains limited in terms of the number of farmers insured, the areas insured, claims paid, and farmers benefited. The number of farmers insured fell 14.87 percent from 572.50 lakh in 2016-2017 to 481.58 lakh in 2017-2018, according to the data. Insurance company claims fell by 20.70 percent from Rs. 11,412.53 crore in 2016-2017 to Rs. 9455.12 crore in 2017-2018, as did scheme coverage, which fell by about 12.88 percent in 2017-2018 compared to 2016-2017. From 289.44 lakh in 2016-2017 to

102.26 lakh in 2017-2018, the number of farmers receiving assistance fell by 64.66 percent. The beneficiary and claim premium ratios under the PMFBY were found to be significantly lower when compared to the ratios under the National Agriculture Insurance Scheme from 2016-2017 to 2018-2019. Crop insurance schemes include the Weather-Based Crop Insurance Scheme (WBCIS), the Modified National Agriculture Insurance Scheme (MNAIS), and the Restructured Weather-Based Crop Insurance Scheme (RWBCIS).

The effects of PMFBY characteristics on farmers' coverage were investigated using a multiple regression model, which revealed that the farmers' premium had a significant effect on the number of farmers insured over the time period, despite the subsidy not playing a significant role in farmers' participation in the insurance scheme.

References:-

1. Agriculture Insurance Company of India Ltd. 2021. Evolution of Crop Insurance. Available online: <https://www.aicofindia.com>
2. Agriculture Statistics at a Glance. 2017. Directorate of Economics and Statistics; New Delhi: Ministry of Agriculture and Farmers Welfare, Government of India.
3. Agriculture Statistics at a Glance. 2018. Directorate of Economics and Statistics; New Delhi: Ministry of Agriculture and Farmers Welfare, Government of India.
4. Agriculture Statistics at a Glance. 2019. Directorate of Economics and Statistics; New Delhi: Ministry of Agriculture and Farmers Welfare, Government of India.
5. Bhushan, Chandra, and Vineet Kumar. 2017. Pradhan Mantri Fasal Bima Yojana: An Assessment. New Delhi: Centre for Science and Environment.
6. Dandekar, Vinayak Mahadeo. 1985. Crop insurance in India: A review, 1976–1977 to 1984–1985. *Economic and Political Weekly*. pp. A46–A59.
7. Department of Financial Services. 2021. Restructured Weather Based Crop Insurance Scheme (2021).
8. Dey, Kushankur, and Maitra Debasish. 2017. Agriculture Insurance in India: Promise, Pitfalls, and the way forward. *Economic and Political Weekly* 52: 89–96.
9. Ghosh, Ranjan Kumar. 2018. Performance Evaluation of Pradhan Mantri Fasal Bima Yojana (PMFBY): Part I: “Governance Analysis”. Ahmedabad: Indian Institute of Management Ahmedabad (IIMA).
10. Ghosh, Sumit. 2019. An Analysis of Pradhan Mantri Fasal Bima Yojana: Expectations and Reality. *International Journal of Advanced Science and Technology* 28: 788–94.
11. Government of India. 2016. Pradhan Mantri Fasal Bima Yojana: Operational Guidelines; New Delhi: Department of Agriculture, Cooperation and Farmers' Welfare, Ministry of Agriculture and Farmers Welfare, Government of India.
12. Government of India. 2018. Pradhan Mantri Fasal Bima Yojana: Revamped Operational Guidelines; New Delhi: Department of Agriculture, Co-Operation and Farmers' Welfare, Ministry of Agriculture and Farmers Welfare, Government of India.
13. Government of India. 2020. Pradhan Mantri Fasal Bima Yojana: Revamped Operational Guidelines; New Delhi: Department of Agriculture, Cooperation and Farmers' Welfare, Ministry of Agriculture and Farmers Welfare, Government of India.
14. Gulati, Ashok, Prerna Terway, and Siraj Hussain. 2018. Crop Insurance in India: Key Issues and Way Forward.
15. Hussain, Siraj. 2020. What Can the Centre Learn from How States Are Managing Their Own Crop Insurance Schemes? July 31.
16. India Brand Equity Foundation (IBEF). 2021. Agriculture in India: Information about Indian Agriculture and Its Importance.
17. IFPRI. 2021. International Food Policy Research Institute.
18. Jain, R. C. A. 2004. Challenges in Implementing Agriculture Insurance and Re-Insurance in Developing Countries. *The Journal* 2004: 14–23.
19. Mahajan, Shrikrishna, and Amol Bobade. 2012. Growth of NAIS: A study of crop insurance in India. *Bauddhik* 3: 1–15.
20. Mishra, Pramod K. 1994. Crop insurance and crop credit: Impact of the comprehensive crop insurance scheme on co-operative credit in Gujarat. *Journal of International Development* 6: 529–67.
21. Mukherjee, Subhankar, and Parthapratim Pal. 2017. Impediments to

- the spread of crop insurance in India. *Economic and Political Weekly* 52.
22. Nair, Reshmy. 2010a. Weather-based Crop Insurance in India: Towards a sustainable crop Insurance Regime? *Economic and Political Weekly* 45: 73–81.
 23. Nair, Reshmy. 2010b. Crop Insurance in India: Changes and Challenges. *Economic and Political Weekly* 45: 19–22.
 24. Rai, Ruchbah. 2019. Pradhan Mantri Fasal Bima Yojana: An assessment of India's crop insurance scheme. *ORF Issue Brief* 16: 296.
 25. Raju, S. S., and Ramesh Chand. 2008. *Agricultural Insurance in India: Problems and Prospects*; NCAP Working Paper 8. National Center for Agriculture Economics and Policy Research.
 26. Tiwari, Rajesh, Khem Chand, and Bimal Anjum. 2020. Crop Insurance in India: A Review of Pradhan Mantri Fasal Bima Yojana (PMFBY). *FIIB Business Review* 9: 249–55.
 27. Tripathi, S. L. 1987. Crop Insurance in India with special reference to Comprehensive Crop Insurance Scheme. In *A Note Prepared for Induction Training Programme in Crop Insurance for Newly Recruited Assistant Administrative Officers of General Insurance Corporation of India*. Pune: Vaikunth Mehata National Institute of Cooperative Management, pp. 9–28.

Impact Of Indian Politics In The World (In The Perspective Of USA And Russia)

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DOI-10.5281/zenodo.7431232

Abstract

India's rise to power has led to speculation and expectations about how it will change the global order. On the one hand, India is huge, with more than 1.3 billion people, and on track to become the world's third-largest economy. Yet India still struggles with poverty and other challenges of a developing economy. India is also the largest and most diverse democracy, but hesitates to promote these values abroad. As the United States welcomes and supports India's rise, Americans should better understand Indians' ambitions for themselves and for their role in the Indo-Pacific and on the world stage—ambitions that are still debated within India. In my book, blog posts, and articles, I focus on the live debates in Indian foreign and economic policy shaping India's future course. I also convene the U.S. Relations with South Asia Roundtable Series to address the challenges and opportunities facing the U.S.-India relationship. The research paper explains the India's Political relations with the world politics, particularly with USA and Russia states.

Key Words: India's political arena with USA, India's political arena with Russia

Introduction

India has diplomatic relations with 201 states/dependencies around the globe, having 199 missions and posts operating globally while plans to open new missions in 2020–21 hosted by 11 UN Member States. The Ministry of External Affairs (MEA), also known as the Foreign Ministry, is the government agency responsible for the conduct of foreign relations of India. With the world's third largest military expenditure, second largest armed force, fifth largest economy by GDP nominal rates and third largest economy in terms of purchasing power parity, India is a prominent regional power, a nuclear power, an emerging global power and a potential superpower. India assumes a growing international influence and a prominent voice in global affairs.

As a former British colony, India is a member of the Commonwealth of Nations and continues to maintain relationships with other Commonwealth countries. Since

gaining independence from Britain in 1947, however, India is now classified as a newly industrialised country and has cultivated an extensive network of foreign relations with other states. As a member state of major economies

encompasses Brazil, Russia, China and South Africa, India also exerts a salient influence as the founding member of the Non-Aligned Movement. In recent decades, India has pursued a more expansive foreign policy that encompasses the neighbourhood first policy embodied by SAARC as well as the Look East policy to forge more extensive economic and strategic relationships with other East Asian countries. Moreover, India was one of the founding members of several international organisations—the United Nations, the Asian Development Bank, New Development BRICS Bank, and G-20, widely considered the main economic locus of emerging and developed nations.

Indias Role In Balancing Trade Relations With Westren And Eastren Nations And The Groups



India has also played an important and influential role in other international organisations like East Asia Summit, World Trade Organization, International Monetary Fund (IMF), G8+5 and IBSA Dialogue Forum. India is also a member of the Asian Infrastructure Investment Bank and the Shanghai Cooperation Organisation.

Regionally, India is a part of SAARC and BIMSTEC. India has taken part in several UN peacekeeping missions, and as of June 2020, is the fifth-largest troop contributor. India is currently seeking a permanent seat in the UN Security Council, along with the other G4 nations.



India wields enormous influence in global affairs and can be classified as an emerging superpower. The deep impact Russia has on India can be gauged by the words of PM himself. PM said that “Every child in India knows Russia is a friend”. Russia being a time tested friend of India.

Indias Political Relations With Usa U S - India Relations

The U.S.-India strategic partnership is founded on shared values including a commitment to

democracy and upholding the rules-based international system. The United States and India have shared interests in promoting global security, stability, and economic prosperity through trade, investment, and connectivity. President Biden and Prime Minister Modi have held two in person bilateral meetings during which they reaffirmed their commitment to a resilient, rules-based international order that safeguards sovereignty and territorial integrity, upholds democratic values, and

promotes peace and prosperity for all. President Biden and Prime Minister Modi have also participated in multiple engagements of the Quad Leaders mechanism with Japan and Australia. The United States supports India's emergence as a leading global power and a vital partner in efforts to safeguard the Indo-Pacific as a region of peace, stability, and growing prosperity. The strong people-to-people ties between our countries, reflected in the four million-strong Indian American diaspora and vibrant educational exchange between the two countries, are a tremendous source of strength for the strategic partnership. The '2+2 Ministerial Dialogue between the U.S. Secretaries of State and Defence and their Indian counterparts' is the premier recurring dialogue mechanism between the United States and India. The United States hosted the fourth 2+2 Dialogue in April 2022. In addition to the 2+2 Dialogue, the United States and India cooperated in dozens of bilateral dialogues and working groups, which span all aspects of human endeavour, from space and health cooperation to energy and high technology trade. These include the U.S.-India Counterterrorism Joint Working Group, which was established in 2000, as well as the Strategic Clean Energy Partnership, Climate Action and Finance Mobilization Dialogue, Cyber Dialogue, Civil Space Working Group, the Education and Skills Development Working Group, Trade Policy Forum, Defence Policy Group, and Counternarcotics Working Group.

Economic Relations

In 2021, overall U.S.-India bilateral trade in goods and services reached a record \$157 billion. The United States is India's largest trading partner and most important export market. Many U.S. companies view India as a critical market and have expanded their operations there. Likewise, Indian companies seek to increase their presence in U.S. markets and at the end of 2020; Indian investment in the United States totalled \$12.7 billion, supporting over 70,000 American jobs. The nearly 200,000 Indian students in the United States contribute \$7.7 billion annually to the U.S. economy.

International Cooperation

India and the United States cooperate closely at multilateral organizations, including the United Nations, G-20, Association of Southeast Asian Nations (ASEAN) Regional Forum, International Monetary Fund, World Bank,

and World Trade Organization. The United States welcomed India joining the UN Security Council in 2021 for a two-year term and supports a reformed UN Security Council that includes India as a permanent member. India is an ASEAN dialogue partner, an Organization for Economic Cooperation and Development partner, and an observer to the Organization of American States. Together with Australia and Japan, the United States and India convene as the Quad to promote a free and open Indo-Pacific and provide tangible benefits to the region. In June of 2022, the Quad countries concluded recruitment for the inaugural Quad Fellows, an opportunity for 100 students, 25 each from Australia, India, Japan, and the United States, to pursue a master's or doctoral studies in STEM in the United States. India is also one of twelve countries partnering with the United States on the Indo-Pacific Economic Framework for Prosperity (IPEF) to make our economies more connected, resilient, clean, and fair. India is a member of the Indian Ocean Rim Association (IORA), at which the United States is a dialogue partner. In 2021, the United States joined the International Solar Alliance headquartered in India, and in 2022 the United States Agency for International Development (USAID) Administrator Samantha Power became Co-chair of the Governing Council of the Coalition for Disaster Resilient Infrastructure (CDRI) where India is a permanent co-chair.

Indias Political Relations With Russia And The East

Nuclear Pact

Russia has inked nuclear pact with India. It has actively supported India with setting up of Kundankulam nuclear power plant and is also supporting in its expansion. This support in the arena of nuclear power is significant because India need to augment its capacity under nuclear power programmed to keep up to its commitment under Paris climate deal.

Kaveri Engine

Russia is actively supporting India with the development of the indigenous Kaveri engine. Kaveri engine will add to India's capacity in defence production.

Make in India is a key programme of the government to develop its manufacturing sector. Russia is actively partnering India in this initiative. India and Russia have signed a landmark deal to jointly manufacture new

generation of light military choppers Kamov 226 under the Make in India. Russia has been constant supporter for India's entry into NSG and APEC. The membership of this premier organization will enhance India's stature.

The structural rigidities have been eliminated with India's membership to MTCR. Russia and India are now planning for Upgradation of the missile system. Brahmos has generated new interests in the world with many countries expressing their desire to acquire Brahmos.

Russia is actively pursuing goal of bringing stability in Afghanistan. It has proposed peace talks as part of its effort. This peace talks with Taliban which is yet to abandon the path of violence is giving legitimacy to Taliban. It is also endorsing the view of good terrorism and bad terrorism. Friendship 2017-military exercise between Pakistan and Russia showed increasing proximity between Russia and Pakistan. There were also talks about the possibility of Russian arm exports to Pakistan...

Traditionally Russia has maintained a neutral position on the issue of conflicts between India and China. In the light of increasing drift between US and Russia, to an extent this multi-vectored policy is adversely affecting India's interests in the region.

Objectives

To understand the political and social stability of India with the world

To maintain the good geo-political relations with the major countries of the world USA and Russia and other major states in the world.

The understand the regional alliances or the groups like ASEAN, BRIC'S, G8, G20 etc, and its merits for India, if it be the member country.

Need Of The Study

To maintain good international relations by India.

For balancing the power between India and the other nations.

The increase in the political stability India increases the role of India's participation in the world politics.

Conclusion

After the Second World War (1945), the United States of America (USA or US in short) emerged as one of the two super powers, the other being the Union of Soviet

Socialist Republics (USSR/ Soviet Union). These countries were militarily and economically so strong as compared to other states that they could project their power to every nook and corner of the world. When India attained independence in 1947, it wanted to have good relations with both the countries. It was widely believed that a natural tie would exist between India and the US since India seemed destined to emerge as the world's largest and Asia's first, fully democratic state. And the US was considered the most powerful and celebrated democracy of the world. So far as the relationship between India and the USSR was concerned, a number of commonalties were easily noticed. But the directions of India's relationships with these two countries took different courses. India is trying to balance the close political relationship with USA and Russia, but in recent decades India has increased its trade interests in USA compare to Russia, due to the changing political stability and in the world.

References

1. <https://www.gktoday.in/upsc-questions/how-is-russia-contributing-in-transforming-india-d/>
2. https://en.wikipedia.org/wiki/Foreign_relations_of_India
3. <https://www.state.gov/u-s-relations-with-india/>
4. <https://www.cfr.org/timeline/us-india-relations>
5. <https://www.nios.ac.in/media/documents/srsec317newE/317EL27.pdf>
6. Foreign policy of India – V S Khanna

HRD Climate in Pharmaceutical Industries

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DOI- 10.5281/zenodo.7431256

Abstract

The main aim of present research was to examine the temperament of HRD-climate in pharmaceutical companies and identify the factors conducive towards HRD-climate. HRD climate plays a very important role in the success of any organization because directly or indirectly it affects the performance of the employees. If the HRD climate is good then the employees will contribute their maximum for the achievement of the organizational objectives. The current research is an attempt to identify the HRD-climate in pharmaceutical companies in Indore city. For this study the researcher used descriptive research design. The universe of the study constituted of 150 different categories employees from two pharmaceutical companies. Among them 75 employees were selected by using purposive sampling. The researcher used questionnaire method to collect the data from the primary source.

Keywords:- HRD-climate, Executive, Non- Executive, pharmaceutical Industries.

Introduction: -

An organisation, in this manner, relies upon individuals for their endurance and development. Along these lines, individuals need organisations. By far most of individuals work to help themselves and their families. Be that as it may, individuals work for some reasons other than financial security. For instance they may likewise work to keep occupied and feel valuable, to make and accomplish something. They need to pick up acknowledgment and accomplish status or to test and stretch their capacities. HRM is worried about the powerful utilization of individuals to accomplish authoritative and singular objectives. It is a method for overseeing individuals at work, with the goal that they give their best to the organisation. It might be characterized as the craft of obtaining, creating and keeping up a skilled workforce to accomplish the objectives of an organisation in a successful and effective way. Human Resource Development is a positive idea in Human Resource Management. It depends on the conviction that an interest in Human Beings is essential and will constantly acquire significant advantages to the association over the long haul. It goes for by and large advancement of HR so as to add to the prosperity of the workers, association and the general public on the loose.

HRD: A Humanistic Concept

- People can do better; they can do wonders.
- Involve them, trust them and empower them: treat them as resource, as assets.
- Focus on the strengths of the People and help them overcome their weaknesses.
- Integrate the needs and aspirations of Individuals into the strategic goals and the mission of an organisation – for better results.
- Encourage individual initiative and response by providing a fostering culture (Openness, trust, collaboration, mutuality etc.)

According to Prof. T.V. Rao, "HRD is a process by which the employees of an organisation are helped in a continuous and planned way to put it plainly, HRD targets helping individuals to procure capabilities required to play out the entirety of their capacities viably and cause their association to progress nicely." HRD Climate includes Three (3) Components

1) General Climate (GC)

2) OCTAPAC

(Openness, Confrontation, Trust, Autonomy, Pro Action, Collaboration)

3) HRD Mechanism

To start with the general atmosphere things, center around the significance given to HR advancement by the top administration and line chiefs, all in all.

The OCTAPAC things manage the degree to which Openness, Confrontation, Trust, Autonomy, Proactivity, Authenticity, Collaboration are esteemed and advanced in the association.

Essential factors of HRD mechanisms Performance Appraisal helps primarily in enabling an individual to develop his present role capabilities. Potential Appraisal helps in identifying the employees' future likely role with an organization. Training aims at developing individual employee's personal effectiveness and develops his ability to perform his job (present or future), strengthens interpersonal relationship and increase team work and collaboration. Feedback and performance appraisal helps in the development of individual as well as supervisor and subordinate relationships. Organizational development means a mechanism of developing team collaboration and self-renewing skills and capabilities.

Review Of Literature: -

Deepak Kumar Gupta, Subhankar Das Et. al. (2019) directed research on "HRD atmosphere in chose open division banks in India" and found in their exploration that It is uncovered from the present investigation that the general atmosphere of SBI is better with contrast with UCO bank. Along these lines, the top administration of UCO bank must be increasingly concerned and cautious for the improvement of their officials. As respects OCTAPACE culture both of the banks observed to be at a similar level while the HRD instrument framework is superior to that of UCO bank. So HRD sub-systems should be increasingly straightforward for the officials of the UCO bank towards by and large authoritative improvement.

Dr. Rashmi Bhatia, Dr. Arun Bhatia (2019) led inquire about on "A Comparative Study on Models of Organizational Culture in Higher Education in India" and found in their examination Each and every model talked about above has its very own unmistakable highlights. For instance, Denison (1995) takes a more extensive view and covers different authoritative perspectives, while Pareek (2002) stresses

on qualities and procedure. Then again, Hofstede's accentuation is on culturally diverse measurements (2010). For instructive organization's social examination, Cameron's (2011) model is progressively proper as it identifies with the way of life of the instructive establishment.

Dhall and Sinha (2018) led examine on "Interceding impact of TQM on connection between hierarchical culture and execution: proof from Indian SMEs" and found in the exploration that The consequences of this examination have recognized some significant regions for future research. Future examinations might be done in different enterprises, locales and countries to further look at if the reasonable model fits into their tasks, which would give further approval of the model proposed in this investigation.

Geetanjali, Bhambhani et. al. (2018) directed research on "An Empirical Research on Impact of HRD Climate on Infosys Pune" and found in their exploration that The examination was started to check effect of HRD-atmosphere in Infosys. The consequence of the examination includes 50 respondents from Infosys. The connection investigation it has been seen that every one of the three segments HRD Mechanisms, General atmosphere and OCTAPACE Culture are exceptionally related to one another the estimation of r is going untruths 0.687 to 0.834, which obviously expressed that variety in single segment will have solid impact on other two segments. Single direction anova uncovers that age conjugal status and experience has no effect on HRD-atmosphere of Infosys. Likewise, Friedman test uncovers HRD instruments is profoundly affecting component of HRD atmosphere with mean position of 2.14.

Suvarna Lapalikar, Kamlesh Bhandari (2017) led look into on "OCTAPACE Culture: A Predictor of workforce execution" and found in their exploration that the eight factors of HRD atmosphere in this way plays a crucial and basic job in upkeep and improvement of representatives, which would prompt higher fulfilment in their activity. OCTAPACE in type of Human asset advancement is a ceaseless procedure to

guarantee the improvement of worker's skills, dynamism, inspiration and viability in a methodical and arranged way. In this investigation all out 500 workforce were chosen and through survey they were gotten some information about the way of life exist in their associations. For the examination, connection and relapse were connected. The discoveries uncover that there is a critical effect of OCTAPACE culture on workforce execution.

Objectives Of The Study:-

1. To study the HRD Climate prevailing in selected MSMEs in Bhavnagar District.
2. To study the differences in the perception of employees based on designation.

Hypotheses Of The Study:-

H01: Employees don't Get Freedom and Have less Importance in Organization.

H02: Employees don't get freedom and are afraid to express or discuss their feelings and ideas with their superior and subordinates.

H03: Seniors don't help juniors to identify their strength & weaknesses and don't help them to solve the mistakes no Punishment for mistakes.

H04: Employees doesn't trust each other in organization.

H05: Top management doesn't delegate the authority to motivate juniors to handle higher responsibilities.

H06: Employees are not sponsored for training & development program by the organization.

H07: Organization doesn't have their special mechanisms to reward employees and take special care to appreciate it.

H08: Organization's performance appraisal system is not based on objective assessment.

H09: Career Opportunities are not pointed out to juniors by senior officers.

H010: Job rotation in the organization doesn't facilitate employee's development.

Methodology:-

Population of the Study is Employees working in Pharmaceutical Industries. Primary data collected through Structured Questionnaire. Coding of variables in quantitative research is very critical for better interpretation of results. Age, total experience, designation, team size, total duration and total value of the project were all coded and were entered in to the computer. The questions and responses were coded and entered in the computer using Microsoft Excel software. A five-point likert scale was designed to gauge the responses in part B. The scales ranged from strongly agree (5) to strongly disagree (1).

Sample And Sample Size:-

The primary data collected from 75 employees of two Pharmaceutical Industries in Indore city were selected for the study that comes around were coded, classified and analysed using Statistical Package for Social Sciences (SPSS Version 22.0). The tools used for analysis of primary data were cross-tabulation, descriptive statistics like arithmetic mean, standard deviation, variance, frequency etc., the tools used for hypothesis testing t-test.

Statistical Tool:-

In order to efficiently use the survey method a questionnaire was developed. The questionnaire was intricately designed. The data collection tool is divided into two parts. Part A covers the information related to respondents like name, designation, and organisation, category of organisation, email id, gender, cadre, education qualification, age group and awareness regarding HRD Climate. This will help the researcher to identify various information and one can analyse the same based on different parameters.

Analysis And Interpretation:-

Table No.: 01
T – Test Analysis – General Climates

General Climate	Employee Cadre	N	Mean	S.D.	Std. Error	t-value	p-value
	Executive	30	2.45	1.34	0.2446		

Employees Get Freedom and Have Enough Importance in Organization						0.6116	0.5427
	Non - Executive	45	2.62	1.06	0.1580		

An independent-samples t-test was conducted to compare Overall HRD Climate in Executive and Non- Executive cadre of employees working in Pharmaceutical Industries. There was no significant difference in the scores for

Executive and Non- Executive conditions ($p > 0.05$). These results suggest that General Climate is really having positive effect on employees except few parameters needs some refinement.

Table No.:02
T – Test Analysis – OCTAPAC

OCTAPAC	Employee Cadre	N	Mean	S.D.	Std. Error	t-value	p-value
Employees should get freedom and are not afraid to express or discuss their feelings and ideas with their superior and subordinates.	Executive	30	1.66	1.08	0.1972	4.3066	0.0001
	Non - Executive	45	2.72	1.02	0.1521		

An independent-samples t-test was conducted to compare Overall HRD Climate in Executive and Non- Executive cadre of employees working in Pharmaceutical Industries. There was no

significant difference in the scores for Executive and Non- Executive conditions ($p < 0.05$). These results suggest that OCTAPAC is really having positive effect on employees except few parameters needs some refinement.

Table No.:03
T – Test Analysis – OCTAPAC

OCTAPAC	Employee Cadre	N	Mean	S.D.	Std. Error	t-value	p-value
Seniors help juniors to identify their strength & weaknesses and help them to solve the mistakes if any made by juniors in place of punishing them.	Executive	30	2.32	1.44	0.2629	2.8173	0.0062
	Non - Executive	45	3.18	1.19	0.1774		

An independent-samples t-test was conducted to compare Overall HRD Climate in Executive and Non- Executive cadre of employees working in Pharmaceutical Industries. There was no significant difference in the scores for

Executive and Non-Executive conditions ($p < 0.05$). These results suggest that OCTAPAC is really having positive effect on employees except few parameters needs some refinement.

Table No.: 04
T – Test Analysis – OCTAPAC

OCTAPAC	Employee Cadre	N	Mean	S.D.	Std. Error	t-value	p-value
Employees trust each other in organization.	Executive	30	2.05	1.96	0.3578	3.0228	0.0035
	Non - Executive	45	3.12	1.10	0.1640		

An independent-samples t-test was conducted to compare Overall HRD Climate in Executive and Non- Executive cadre of employees working in Pharmaceutical Industries. There was no

significant difference in the scores for Executive and Non-Executive conditions ($p < 0.05$). These results suggest that OCTAPAC is really having positive effect on employees except few parameters needs some refinement.

Table No.: 05
T – Test Analysis – OCTAPAC

OCTAPAC	Employee Cadre	N	Mean	S.D.	Std. Error	t-value	p-value
Delegation of authority to motivate juniors to handle higher responsibilities and juniors will take it as an opportunity for their development.	Executive	30	2.88	1.31	0.2392	2.5994	0.0113
	Non - Executive	45	1.91	1.74	0.2594		

An independent-samples t-test was conducted to compare Overall HRD Climate in Executive and Non- Executive cadre of employees working in Pharmaceutical Industries. There was no significant difference in the scores for

Executive and Non-Executive conditions ($p < 0.05$). These results suggest that OCTAPAC is really having positive effect on employees except few parameters needs some refinement.

Table No.: 06
T – Test Analysis – OCTAPAC

OCTAPAC	Employee Cadre	N	Mean	S.D.	Std. Error	t-value	p-value
Employees are sponsored for training & development program by the organization based on genuine needs of training employees take a seriously for individual & organizational development.	Executive	30	2.77	1.09	0.1990	4.6287	0.0001
	Non - Executive	45	1.36	1.41	0.2102		

An independent-samples t-test was conducted to compare Overall HRD Climate in Executive and Non- Executive cadre of employees working in Pharmaceutical Industries. There was significant difference in the scores for Executive and Non- Executive conditions

($p < 0.05$). These results suggest that this parameter of OCTAPAC is really having Negative effect on employees. It may create disputes between Executive and Non- Executive Cadre of Employees. So, this parameters needs some refinement.

Table No.: 07
T – Test Analysis – HRD Mechanism

HRD Mechanism	Employee Cadre	N	Mean	S.D.	Std. Error	t-value	p-value
Organization has their special mechanisms to reward employees and take special care to appreciate it.	Executive	30	2.44	1.21	0.2209	0.7764	0.4400
	Non - Executive	45	2.19	1.46	0.2176		

An independent-samples t-test was conducted to compare Overall HRD Climate in Executive and Non- Executive cadre of employees working in Pharmaceutical Industries. There was no significant difference in the scores for

Executive and Non-Executive conditions ($p > 0.05$). These results suggest that HRD Mechanism is really having positive effect on employees except few parameters needs some refinement.

Table No.: 08
T – Test Analysis – HRD Mechanism

HRD Mechanism	Employee Cadre	N	Mean	S.D.	Std. Error	t-value	p-value
Organization's performance appraisal system is based on objective assessment and any weakness found will be communicated to the employees in positive way in place of threatening way.	Executive	30	1.81	1.33	0.2428	3.3019	0.0015
	Non - Executive	45	2.75	1.12	0.1670		

An independent-samples t-test was conducted to compare Overall HRD Climate in Executive and Non- Executive cadre of employees working in Pharmaceutical Industries. There was no significant difference in the scores for

Executive and Non- Executive conditions ($p < 0.05$). These results suggest that HRD Mechanism is really having positive effect on employees except few parameters needs some refinement.

Table No.: 09
T – Test Analysis – HRD Mechanism

HRD Mechanism	Employee Cadre	N	Mean	S.D.	Std. Error	t-value	p-value
Career Opportunities are pointed out to juniors by senior officers.	Executive	30	1.65	1.19	0.2173	0.8993	0.3715
	Non - Executive	45	1.42	1.01	0.1506		

An independent-samples t-test was conducted to compare Overall HRD Climate in Executive and Non- Executive cadre of employees working in Pharmaceutical Industries. There was no significant difference in the scores for

Executive and Non- Executive conditions ($p > 0.05$). These results suggest that HRD Mechanism is really having positive effect on employees except few parameters needs some refinement.

Table No.: 10
T – Test Analysis – HRD Mechanism

HRD Mechanism	Employee Cadre	N	Mean	S.D.	Std. Error	t-value	p-value
Job rotation in the organization facilitates employee's development.	Executive	30	2.37	1.51	0.2757	1.0362	0.3035
	Non - Executive	45	2.02	1.38	0.2057		

An independent-samples t-test was conducted to compare Overall HRD Climate in Executive and Non- Executive cadre of employees working in Pharmaceutical Industries. There was no significant difference in the scores for Executive and Non-Executive conditions ($p > 0.05$). These results suggest that HRD Mechanism is really having positive effect on employees except few parameters needs some refinement.

Findings:-

1. More than respondents believed that they are getting enough freedom and importance in their concern organization.
2. More than respondents believed that their concern organisations' policies facilitate employees' development.
3. More than respondents believed that their concern organisations' top management putting efforts to identify and utilize their potentials.
4. More than believed that they are getting enough freedom to express their feelings and ideas with their superiors and subordinates.
5. More than respondents believed that when problems arise people are discussing these problems openly and will try to solve them rather accusing each other behind the back.
6. More than respondents believed that their seniors are helping them to identify their strength and weakness and are also helping them to solve the mistakes if they made.

7. Less than respondents believed that they trust each other in their respective organisation. This is believed by them from their past experience with their colleague.

8. Less than respondents believed that they are not getting motivation form their top management to implement innovative and creative ideas for organisational development.

9. More than respondents believed that Top Management delegate the authority to motivate juniors to handle higher responsibilities.

10. Less than respondents believed that their respective organisations' top management identifying their potentials and competencies.

11. More than respondents believed that they are getting sponsorship from their respective organisations for training and development programs, which they should be provided for individual as well as organisational development point of view.

12. More than respondents believed that they are able to apply the concept called T.E.A.M. (Together Everyone Achieves More) and they get support of each other's strengths & weaknesses.

13. More than respondents believed that Promotion discuss are based on the contemporary and abilities rather than based on any favouritism. It will damage their working performance individually as well as organisational performances.

14. More than respondents believed that their respective organisations has special

mechanisms to reward them for their performances and their respective organisations also taking special steps to appreciate their best performances. It will motivate to this category of employees.

15. More than respondents believed that their concern Organization's performance appraisal system is based on objective assessment.

16. More than respondents believed that senior officers from their concern organisations are pointing out in identifying career opportunities available for them.

17. More than respondents believed that in their respective organisations, Job rotation facilitates employee's development.

18. Less than respondents believed that seniors don't guide their juniors and prepare them for their future responsibilities / roles they are likely to take up in the future.

Limitations Of The Study:-

1. The organizational culture and climate of Pharmaceutical Industries which are located in Indore city were only considered.

2. The research study was focused only of HRD Climate.

3. This research study was carried out in Pharmaceutical Industries of private sector; the findings of the study may not applicable to other types of organization.

4. The data is based on individual opinion, which may bring in some bias or it may change with time.

Conclusion:

1. General Climate and HRD Mechanism are under Questionable level of Internal Consistency in Cronbach's Alpha reliability test as both are less than 0.7. Promotions are still based on favouritism observed in many organizations, which indicates urgent need to improve promotion policy. Employees must provide the motivation to utilise and implement best of their innovative and creative ideas in their concern organisation. Employees must be given freedom to express their ideas and feelings with their staff.

Employees must be given guidance and suggestions regarding their mistakes in place of punishments. The study reveals that employees expecting support for

training programs from 2.Top management, as these training programs will be useful for the development of both Individuals as well as organizations. Employees from each cadre must be provided counselling and mentoring to develop and maintain the TEAM (Together Everyone Achieves More) concept.

3. Top management needs to set up competency mapping mechanism in their concern organization. Pharmaceutical Industries in Indore city must adopt Performance appraisal and

Promotion system which should be biased free and objective. Pharmaceutical Industries should create best working environment where, each one feeling sense of full trust on each other. Overall, OCTAPAC is fabulous which is truly good sign for the development of employees as well as their organisations.

4. In this research study, research found that in comparing to large scale organisations people trust more on each other and working together for their own as well as organisational development point of view. It has also found by the researcher that even though promotions on front taking place based on objectivity but still some of the old fashioned organisations promoting their employees based on YES BOSS approach, which can harm those organisations in long run. This research study also reveals that almost 45% of the respondents' replied can't say when it comes to asking about team work in the organisation. It's amazing to know that even though seniors truly guide their juniors for certain development related activities.

5. It has also observed by the research in this research study based on their cadre even though most of the respondents were belongs to Non- Executive category and Executive category, but the good part of this is most from non- executives also knowing about this concepts and working positively in their respective organisations.

References: -

1. Dr. Rashmi Bhatia, Dr. Arun Bhatia (2019), "A Comparative Study on Models of Organizational Culture in Higher

Education”, The research journal of social sciences, Vol. 10, No.6, pp. 75-83.

2. Gupta, Deepak Kumar, Jena, Duryodhan, et. at. (2019), “HRD climate in selected public sector banks in India”, Revista ESPACIOS, Vol. 40, No. 11, pp.14-21.

3. Bhambhani, Geetanjali, et al. (2018), "An Empirical Research on Impact of HRD Climate on Infosys Pune." Journal of Technology Management for Growing Economies, vol. 9,no. 1, pp. 7-21.

4. Suvarna Lapalikar and Dr. Kamlesh Bhandari (2017), “OCTAPACE Culture: A Predictor of Faculty Performance”, International Journal of Research in Commerce and Management, Vol.08, No.8, pp. 18-21.

5. Sekar N (2014), “HRD climate and its relationship to role satisfaction a study on manufacturing companies in krishnagiri district”, Doctoral dissertation, Anna University,

Faculty of Management Studies, Chennai,
6. Rao VSP (2010) “Human Resource Management: Text and Cases”, Excel Books, New Delhi, 3rd Edition, p.16

7. Kumar, Dr. Sharad (2005), “Human Resource Management in Central Bank Management”, Published by Indian Institute of Banking & Finance, Macmillan Publishers limited, Mumbai.

8. Mathur, B.L. (1990), “Human Resource Development” Arihant Publishers, Jaipur.

Online Buying Behavior- A Tool for Economic Development

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DOI-10.5281/zenodo.7431294.

Abstract

The World Wide Web has propelled in no small extent of changes in the attitude and behavior of people all over the world. Due to this blessing, online shopping has emerged which influenced the lives of ordinary citizens. Online shopping has also been started in Bangladesh, but consumers are not much habituated yet to go online shopping frequently. This study is undertaken to understand the behavior of online shoppers through a self-constructed questionnaire. The survey reveals that consumers shop online to save time, and for available varieties of products and services. Both male and female both have the same type of behavior towards liking and disliking factors; they like home delivery facility and dislike inability to touch and feel the product most.

Introduction:

Online shopping or e-shopping is a form of electronic commerce which allows customers to directly buy goods or services from a seller over the internet using a web browser. Michael Aldrich is the man who invented online shopping in 1979. With the increasing internet literacy, the prospect of online marketing is increasing in India. Alternative names of online shopping are online store, e-shop, e-store, internet shop, web shop, online storefront and virtual store. An online shop evokes the physical analogy of buying products or services at a bricks and mortar retailer or shopping center. The process is called B2C online shopping. The largest of online sellers are FlipKart, Snap Deal, Amazan.com and Ebay. Customers are buying from online store. This is evident because of the increase in retailer now offering online store interfaces for customers. With the growth of online shopping comes the concept of satisfaction and loyalty for websites which are involved in providing services on the website and transacting online. Companies before using effective marketing strategies analyze various factors to convert potential customers into active ones. The five dominant factors which influence customer perception of online shopping are information, ease of use, satisfaction, security/ privacy, and proper utilization.

Electronic commerce has become a buzzword for businesses over the past few years with increased awareness about the use of computer and communications technologies to simplify business procedures and increase efficiency.

Combining a range of processes, such as electronic data interchange (EDI), Electronic mail (e-mail), World Wide Web (www), and internet applications, e-commerce provides ways to exchange information between individuals, companies, and countries.

Using the internet one can communicate with other people throughout the world by means of e-mail, online version of newspapers, magazines, academic journals, and books, and discussion groups on almost any conceivable topic. In recent years, the internet has allowed commercial enterprises to connect with one another and with customer. Today, all kinds of businesses provide information about their products and services.

Electronic commerce has witnessed an exponential growth resulting in greater use of this tool by the traders. Also competitions in E-commerce are intensified. Therefore it becomes more important for online retailers to understand the antecedents of customer acceptance of online shopping. Such knowledge is essential to customer relationship management, which has been recognized as an effective business strategy to achieve success in the electronic market. The enormous advantages offered by electronic shopping stimulate corporate managers, marketing departments and retailers to offer their products through websites to attract the largest number of shoppers, not only to local markets but also globally. The current research is an effort to understand the satisfaction and buying behavior of the

buyers shopping online.

Statement Of The Problem

At any given time there are millions of people online and each of them is a potential customer for a company providing online sale. Due to the rapid development of the technologies surrounding the Internet, companies are interested to sell their products through their websites. Because they may belong to different part of world and they have different types of languages. The internet has developed in to new distribution and rapidly increased. Since internet is a new virtual medium with many potential consumers, the online retailer must understand the wants and needs of such consumers. The importance of analyzing and identifying the factors influencing the consumer when he or she decides to purchase on the internet is vital because new virtual market will bring significant difference to the consumers. Analyzing consumers' behavior is not a new phenomenon. Many theories have been used for many years not only to understand the consumers' attitude, but also to create a marketing strategy that will attract the consumer efficiently. However, some distinctions must be made when considering traditional consumer behavior and online consumers' behavior. Even though there are many research topics in the field of business to consumer in the contest of internet business, online retailing is a new retailing medium and online consumer behavior is diverse from traditional consumer behavior.

Objectives Of The Study

To study the factors influencing the consumers preference for online shopping in Tirunelveli district.

To analyze the consumer's satisfaction towards online shopping in Tirunelveli district.

To examine the product involvement and consumer attitude towards online shopping for each product in Tirunelveli district.

To know the perception of online customers and their expectation towards their seller in Tirunelveli district.

Review Of Literature

Vrechopolous et al (2010) found that the most highly valued characteristics on a website include quality and the amount of information provided for products / services.

Discount / promotions, product range, delivery quality and 24 * 7 accessibility are the significant purchase motivators.

Bette Ann et al (2010) opined that incredible growth of electronic commerce and presents ethical issues that have emerged. Security concerns, spamming, websites that do not carry an advertising label, cyber squatters, online marketing to children, conflict to interest, manufactures competing with intermediaries online, and dinosaurs are discussed. The power of internet to spotlight issues was noted as a significant force in providing a kind of self-regulation that supports an ethical e commerce environment.

Vijayssarathy (2010) conducted the study on "The impact of shopping orientations, product types, and shopping Aids on Attitude and Intention to use online shopping and the study revealed the integrated web specific factors (online shopping aid) in order to better explain consumer online shopping behavior.

Vasterby and Chabert (2011) studied on **E-Marketing** and found that the internet can make it easier for companies to have information about their products or services available to their customers or potential customers. A company can satisfy the consumer's individual need of information at a low cost in comparison to sending out product brochures and online shopping is one of the most rapidly growing forms of shopping with sales growths rates that outpace buying through traditional retailing.

Shim, Eastlick, Lotz, & Warrington (2011) proposed an online pre purchase intention model in order to explain the prediction of online purchase intention and found that consumer's positive attitudes towards online shopping significantly influenced the use of the internet for information searching and intention to shop online.

Hypotheses

There is no significant difference in the buying behavior or customer towards product variety among different sources of information online shopping.

There is no significant difference in the buying behavior or customer towards Delivery Method among difference biggest concerns in online shopping.

There is no significant difference in the

buying behavior or customer towards Customer Service among different Frequencies of buying in online shopping.

Research Methodology

This study is based on hypothesis testing regarding the fact that data were collected only once to answer to research questions through questionnaire, concerning the fact consumers satisfaction towards online shopping.

Primary source

Primary data was collected directly from the online shopping on customer behavior with the help of questionnaire from respondents.

Secondary source

Secondary data has been collected through websites, books, magazine and journal on the selected topics.

Sampling design

The scope of the study is limited to Tirunelveli district only, so the researcher has selected the customers from Tirunelveli district. It is decided to use Random sampling method.

Tools Of Analysis

Percentage analyses, one way ANOVA,

The results found with the help of ANOVA have been tabulated in the following table.

Independent sample t-test were used to analyze the data using Statistical package for social sciences (SPSS).

ANOVA

The framed null hypothesis has been test through analysis of variances (ANOVA). The ANOVA test is made by the researcher to test whether significant difference exists among three or more sample means. The total variance is a set of data divided into variation between groups.

Frequency of buying and customer buying behavior

The online shoppers belonging to different frequency of buying such as less than 2 years, 2 to 4 years, 4 to 6 years, above 6 years have been involved in customer buying on online shoppers may7 have an impact on customers buying behavior. Customers buying behavior among different frequency of online shoppers is tested by the researcher through ANOVA. For that purpose a hall hypothesis has been framed as “there is no significant difference in customer buying behavior among different frequency of buying on online shoppers in Tirunelveli district.

Customer buying behaviour	Frequency of buying online	Mean Standard Deviation	N Df	F value	P value
Privacy	Less than 2 years	19.57	67 4 30 115 10 119	10.202	.000
	2 to 4 years	3.345			
	4 to 6 years	22.80			
		2.797			
Security	Less than 2 years	10.84	67 4 30 115 10 119	7.402	.000
	2 to 4 years	2.756			
	4 to 6 years	13.37			
		1.033			
	12.00	1.054			

Time saving	Less than 2 years	19.40	2.887	67	4	6.481	.000
	2 to 4 years	18.47	3.115	30	115		
	4 to 6 years	21.00	1.054	10	119		
Ease of Use	Less than 2 years	30.02	5.184	67	4	8.632	.000
	2 to 4 years	33.63	2.965	30	115		
	4 to 6 years	31.50	2.635	10	119		
Convenience	Less than 2 years	20.59	2.329	67	4	9.392	.000
	2 to 4 years	22.60	1.275	30	115		
	4 to 6 years	22.50	.527	10	119		
Company Reputation	Less than 2 years	10.85	3.163	67	4	1.093	.363
	2 to 4 years	10.80	1.808	30	115		
	4 to 6 years	11.00	0.000	10	119		
Product variety and Quality	Less than 2 years	13.85	2.824	67	4	1.632	.171
	2 to 4 years	15.16	2.948	30	115		
	4 to 6 years	14.40	3.098	10			
Delivery Method	Less than 2 years	11.00	0.000	10	119	1.471	.216
	2 to 4 years	13.85	2.824	67	4		
	4 to 6 years	15.16	2.948	30	115		
		14.40	3.098	10			

		12.49	3.897	67	4	119		
		14.06	3.172	30	115			
		11.80	3.098	10	119			
Customer Service	Less than 2 years	13.97	4.942	67	4		.704	.591
	2 to 4 years	14.03	4.986	30	115			

	4 to 6 years	13.90	3.843	10	119			
Overall customer buying	Less than 2 years	151.32	22.853	67	4		4.870	.000
	2 to 4 years	164.93	14.883	30	115			
	4 to 6 years	161.00	11.10	10	119			

Table reveals that out of 120 respondent's 67 percent of the respondents are less than 2 years, 30 percent of the respondents are 2 to 4 years, 10 percent of the respondents are 4 to 6 years 10 percent of the respondents are above 6 years and 5 percent of the respondents are others. As per online shopping majority of the respondents of frequency of buying is less than 2 years. From the ANOVA test is is found that the 'F' value for Privacy, Security, Time saving , Ease of use Convenience, company reputation, product variety and quality, delivery methods, customers and overall customer buying behavior among different year of frequency of buying online shoppers in Tirunelveli district is (F value) 10.202,7.402,6.481,9.392,1.093,1.632,.704 which is significant at 5% P value of

.000,.000,.000,.000,.000, since p value is less than 0.05 the null hypothesis is rejected and P value of .363,.171,.216,.591 is greater than 0.05 and the null hypothesis is accepted. Therefore it may be conclude that there is a significant difference in for Privacy, Security, Time saving , Ease of use Convenience, company reputation, product variety and quality, delivery methods, customers and overall customer buying behavior

Types of products and customer buying behavior

The online shopper belonging to different type of product such as Electronic Items, Clothing and Cosmetics Household Items, Music Software have been involved in customer buying behavior at different products. Hence the types of products on online shoppers may have an impact on

customer buying behavior among different products of online shoppers is null hypothesis has been framed as “there is no significant difference in customer buying

behavior among different types of product on online shoppers in Tirunelveli district. The results found with the help of ANOVA have been tabulated in the following table.

Customer buying behavior	Frequency of buying online	Mean Standard Deviation	N Df	F value	P value
Privacy	Electronic items	20.74	81 3 116	.738	.531
	Clothing & Cosmetics	3.781			
	Household items	21.44			
	Music, Software	2.708			
Security	Electronic items	11.63	81 3 116	3.197	.026
	Clothing & Cosmetics	2.786			
	Household items	12.48			
	Music, Software	1.156			
Time saving	Electronic items	19.38	81 3 116	2.848	.041
	Clothing & Cosmetics	3.104			
	Household items	20.89			
	Music, Software	2.650			
		23.00	3		
		.000	119		
		21.56	9		
		.527			
		14.00	3		
		.000	119		
		10.11	9		
		1.104			
		17.00	3		
		.000	119		

		19.11 1.054 9		
Ease of Use	Electronic items Clothing & Cosmetics Household items Music, Software	31.56 5.18 81 3 32.77 5.14 27 116 30.00 .000 3 119 30.33 1.5811 9	.788	.503
Convenience	Electronic items Clothing & Cosmetics Household items Music, Software	21.172 2.189 81 3 21.88 2.375 27 116 23.00 .0000 3 119 21.55 .52705 9	1.345	.263
Company Reputation	Electronic items Clothing & Cosmetics Household items Music, Software	10.51 2.891 81 3 11.85 1.026 27 116 13.00 .0000 3 119 12.33 1.5811 9	3.564	.016

Product variety and Quality	Electronic items	14.25				.342	.795
	Clothing & Cosmetics		3.05				
	Household items			81	3		
	Music, Software	14.85	2.67	27	116		
		13.66	2.309	3	119		
		14.44	2.403	9			
Delivery Method	Electronic items	12.82				.746	.527
	Clothing & Cosmetics		3.730				
	Household items			81	3		
	Music, Software	13.92	3.796	27	116		
		12.00	1.732	3	119		
		12.33	3.391	9			
Customer Service	Electronic items	13.73				2.058	.110
	Clothing & Cosmetics		4.988				
	Household items			81	3		
	Music, Software	13.22	3.886	27	116		
		15.33	4.619	3	119		
		17.44	3.358	9			
Overall customer buying	Electronic items	155.82				.915	.436
	Clothing & Cosmetics		22.675				
	Household items			81	3		
	Music, Software	163.44					

		16.150	27	116	
		161.00	8.602	3	119
		159.22	8.657	9	

Table reveals that out of 120 respondent's 67 percent of the respondents are Electronic Items, Clothing and Cosmetics Household Items, Music Software 3 percent of the respondents are household items and 9 percent of the respondents are Music, As per online shopping majority of the respondents of types of products in electronic items. From the ANOVA test is found that the 'F' value for Privacy, Security, Time saving , Ease of use Convenience, company reputation, product variety and quality, delivery methods, customers and overall customer buying behavior among different year of frequency of buying online shoppers in Tirunelveli district is (F value) 7.38,3.197,2.848,.788,1.345,3.564,.342,.746, 2.058 which is significant at 5% P value of .531,.026,.041,.503,.263,.016,.795,.527,.110 Since P value is greater than 0.05 and the null hypothesis is accepted. Therefore it may be conclude that there is no significant

difference in for Privacy, Security, Time Saving, Ease of Use Convenience, Company Reputation, Product Variety And Quality, Delivery Methods, Customers Service.

Types of products and customer buying behavior

The online shopper belonging to different biggest such as safety, privacy, return policy, correct merchandise and other have been involved in customer buying behavior at different concern. Hence the biggest concerns of online shoppers may have an impact on customer buying behavior. Customer buying behavior among different biggest concerns of online shoppers is tested by the researcher through ANOVA. For the purpose of null hypothesis has been framed as "there is no significant difference in concerns of online shoppers in Tirunelveli district. The results found with the help of ANOVA have been tabulated in the following table.

Customer buying behavior	Frequency of buying online	Mean	Standard Deviation	N	Df	F value	P value
Privacy	Safety	19.77	3.25	30	4	5.005	.001
	Privacy						
	Return policy	21.13	2.20	39	115		
	Correct Merchandise	18.78	2.63	9	119		
		21.92	4.12				

		25.00	37		
		.000	5		
Security	Safety	11.47	30	4.256	.003
	Privacy	1.57	4		
	Return policy	10.90	39		
	Correct	3.44	115		
	Merchandise	11.11	9		
		1.0554	119		
		12.92	37		
		1.639	5		
		13.00			
		.000			
Time saving	Safety	19.30	30	5.871	.000
	Privacy	2.55	4		
	Return policy	18.76	39		
	Correct	19.52	115		
	Merchandise	18.33	9		
		3.162	119		
		20.56	37		
		3.321	5		
		24.00			
		.0000			
Ease of Use	Safety	32.26	30	27.779	.000
	Privacy	3.321	4		
	Return policy	28.10	39		
	Correct	3.9188	115		
	Merchandise				

		27.33	3.162	9	119		
		35.00	3.7267	37			
		40.00	.0000	5			
Convenience	Safety	20.73	2.033	30	4	3.853	.006
	Privacy						
	Return policy						
	Correct	21.28	2.73	39	115		
	Merchandise						
		20.85	.5270	9	119		
		21.94	1.489	37			
		24.00	0.000	5.002			
Company Reputation	Safety	11.90	1.953	30	4	4.655	.002
	Privacy						
	Return policy						
	Correct	9.67	3.463	39	115		
	Merchandise						
		11.67	1.531	9	119		
		11.43	1.573	37			
		12.00	.0000	5			

Product variety and Quality	Safety	14.93				5.450	0.000
	Privacy		2.331				
	Return policy			30	4		
	Correct Merchandise	13.41	2.682	39	115		
		11.77	1.986	9	119		
		15.40	3.095	37			
		16.00	2.738	5			

Delivery Method	Safety	13.46				1.838	.126
	Privacy		3.234				
	Return policy			30	4		
	Correct Merchandise	11.75	3.669	39	115		
		12.55	2.185	9	119		
		13.81	4.040	37			
		14.20	1.095	5			
Customer Service	Safety	16.53				3.787	.006
	Privacy		5.387				
	Return policy			30	4		
	Correct Merchandise	13.10	4.346	39	115		
		12.33	3.041	9	119		
		13.51	4.420				

		10.80	37		
		1.095	5		
Overall customer buying	Safety	160.36	15.66	30	4
	Privacy	147.48	21.383	39	113
	Return policy	144.44	15.56	9	117
	Correct Merchandise	166.51	18.80	37	
		179.00	8.215	7	
					7.918
					.000

Table reveals that out of 120 respondent's 30 percent of the respondents are safety 39 percent of the respondents are privacy, 9 percent of the respondents are return policy 37 percent of the respondents are correct merchandise and 5 percent of the respondents are others. As per online shopping majority of the respondents of biggest concerns is privacy.

From the ANOVA test is found that the 'F' value for Privacy, Security, Time saving, Ease of use Convenience, company reputation, product variety and quality, delivery methods, customers and overall customer buying behavior among different year of frequency of buying online shoppers in Tirunelveli district is (F value) is 5.005,4.256,5.871,27.779,3.853,4.655,1.838,3.787, which is significant 5 percent p value of .001,.003,.002,.000 which is less than 0.05 and the null hypothesis is rejected and p value of .006,.125,.006 which is greater than 0.05 and the null hypothesis is accepted. Therefore it may be concluded that there is no significant difference in convenience, delivery method and customer service among the different biggest concerns of online shoppers in tirunelveli district. It is concluded that biggest concers is a significant

variable in Privacy, Security, Time saving, Ease of use Convenience, company reputation, product variety and quality and overall buying behavior is a significant variable among customer buying behavior.

Finding

It shows that there is a significant variable in buying behaviors among biggest concerns of online shoppers in Tirunelveli district. It is observed that biggest concerns there are a insignificant variable in product quality and variety, and overall buying behaviors. It is observed that biggest concerns is a significant variable in determining privacy, security, time saving, ease of use, convenience, company reputation, deliver method, customer service, product quality among customer buying behavior. It shows that there is a significant variable in buying behaviors among different types of product of online shoppers in Tirunelveli district. It is observed that types of product there is a insignificant variable in privacy, security, time saving, ease of use, convenience, company reputation, deliver method, customer service and overall buying behavior among customer buying behavior. It shows that there is a significant variable in buying behaviors among different frequency

of buying of online shoppers in Tirunelveli district. It is observed that frequency of buying there are a significant variable privacy, security, time saving, ease of use, convenience, company reputation, deliver method, customer service, product quality among customer buying behavior. It is observed that types of product there is a insignificant variable in determining the company reputation product variety and quality, delivery method and customer service among customer buying behavior.

Conclusion

In the past, consumers had sufficient time to visit shopping centers, searching for various products. Many consumers prefer bargaining and decide the purchases after physical examination of the commodities. The entire process can range from a few hours to weeks depending on the product, quality, quantity and source of purchase. Today there is radical change in the entire scenario. Everything is today's world is internet oriented like electronic data interchange, E-mail, E-business and E-commerce. E-commerce is exchange of information using network-based technologies. In the present high cost situation, E-commerce can be used as a competitive strategy. It successfully includes the entire online process of developing, marketing, selling, delivering, servicing and paying for products and services. Online shopping is a vast growing technology. If it is properly utilized with assured safety and security for the transactions,

it will thrive into a highly competitive and dynamic environment. In future, online shopping is bound to grow in a big way, given the growing youth population.

References /Bibliography

1. Ahtsham nishant, flip kart.com: the breakthrough in the e-world, international journal of research and development in the technology and management sciences, 2013, page 1-8.
2. Beheti gunjan, jain, rajendra kumar, jain nidhi, the impact of advertising appeals on customer buying behavior.
3. Balamuruganrengasamynatarajan, satishm ahendranand sathyanarayanroyalusivasubramanian, on-going research, consumer behavior towards online shopping, a study with reference to coimbatore city, tmc academic journal, 2013, page 43-53.

4. Bellman steven, lohsegerald l. And johnsoneric j, predictors of online buying behavior, communications of the acm, dec. 1999, page 32-38.

5. Black. Gregory. S, is ebay for everone an assessment of consumer demographics, sam advanced management journal, 2005, page 50-59

6. Chawla, dr. Reeta and pathak dr., ashish, dr., kumbhankhandewal, innovative online shopping experience with special reference to fipkart, altiusshodh journal of management and commerce. 7. Brown mark, pope nigel, vogeskevin, zealand new, buying or browsing? An exploration of shopping orientations and online purchase intention, european journal of marketing, 2003, page 1666-1684.

The Study Of Important Mathematical Applications Of Ancient India

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DOI- 10.5281/zenodo.7431312

Abstract:

In all ancient civilizations, the first expression of mathematical knowledge appears in the form of a calculation system. In very early societies, numbers were represented by a set of lines. Later, however, different numbers came to be represented by specific numerical names and symbols, for example in India. In places such as Rome, they were called alphabets, but not all numbers in ancient civilizations were based on the decimal system. Records of mathematical activities in the Vedic period are mostly found in the Vedas along with religious rituals. As in many other agriculturally based ancient civilizations, the study of arithmetic and geometry was also inspired by secular activities. Thus, to some extent, old mathematical advances developed in India in the same way as in Egypt, Babylon, and China. Philosophical theories profoundly influenced the development of mathematical hypotheses and axioms. Like the Upanishads' view of the world, space and time were considered infinite in Jain's philosophy. This led to a strong interest in the definitions of very large numbers and infinitesimals. In this research paper, important mathematical applications of ancient India have been studied.

Keywords: Ancient Civilization, Mathematical Hypothesis, Mathematical Activity, Mathematical Application, Arithmetic Function.

Research Methodology:

The research paper has depended on secondary data.

Objective of Research:

- 1) To study the important Mathematical Applications of Ancient India.
- 2) To study the history of important Mathematical Applications of Ancient India.

Introduction:

The decimal system existed in India during the Harappan period, as evidenced by the analysis of Harappan weights and measures. Weights with ratios of 0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 50, 100, 200, and 500 have been identified from that period. Scales with decimal divisions have also been found. One special feature of Harappan weights and measures that attracts attention is their accuracy. A bronze rod with ghats in units of 0.367 inches indicates the degree of accuracy demanded by the time. Records of mathematical activities in the Vedic period are mostly found in the Vedas along with religious rituals. Nevertheless, as in many other agriculturally based ancient civilizations, the study of arithmetic and geometry was also inspired by secular activities. Thus, to some extent, ancient mathematical advances developed in India in the same way as in Egypt, Babylon, and China. The land distribution system and the assessment of agricultural tax required accurate measurement of the agricultural area. When there was a redistribution of

land, their consolidation, then there was a problem of land measurement, whose solution was necessary, thus mathematics was useful in the services of both secular activity and ritual.

Arithmetic operations such as addition, subtraction, multiplication, division, square, cube, and moola are described in the Narada Vishnu Purana. Its pioneer is considered to be Ved Vyas who lived in 1000 BC. Had happened Examples of Geometry / Line Mathematics / Science 800 BC. In Baudhayana's Shulva Sutra and 600 B.C. Apastamba Sutra describes the technique of construction of the ritualistic sacrificial altar used in the Vedic period. These texts may have used geometrical knowledge acquired in an earlier period, possibly in the Harappan period. Baudhayan's formula shows information about basic geometric shapes and how to convert one geometric shape into another isosceles shape or its fraction or its multiple.

Philosophical theories profoundly influenced the development of mathematical hypotheses and axioms. Like the Upanishads' view of the world, space and time were considered infinite in Jain's philosophy. This led to a great interest in the definitions of very large numbers and infinitesimals. Infinite numbers were created through recursive formulas. The same was done in Anuyogadwara Sutra. Jain mathematicians told five types of infinite numbers, which include infinite in one direction, infinite in

two directions, infinite in area, infinite everywhere, and infinite continuously. 3rd century BC In the Bhagavati Sutras composed in 2nd century B.C. The permutation combination listed in the Sthananga Sutra composed in Jain set theory probably arose parallel to Syadvad of Jain epistemology, in which reality is described as state-pairs and state-change pairs of truth. Buddhist literature also shows an awareness of indefinite and infinite numbers. Buddhist mathematics was classified into 'ganana' i.e. simple mathematics or 'sankhyana' i.e. higher mathematics. Indian numerals developed into their modern form between the 7th and 11th centuries and became the foundation stone of modern mathematical symbols, with symbols representing various mathematical operations such as plus, minus, square root, etc.

Bhaskar-I handled the incomplete work of Aryabhata and elaborated on topics such as longitude of planets, relation of planets to each other and luminous constellations, rising and setting of planets and moon phase. These studies required more advanced mathematics. So Bhaskara elaborated the trigonometric equations introduced by Aryabhata and reached the correct conclusion like Aryabhata that pi is an irrational number. It is his most important contribution. The astrologer mathematician Varahamihira was born in Ujjain in the 6th century CE who co-wrote earlier written books on mathematical astrology and extended Aryabhata's corpus of trigonometric formulas. His works on permutations and combinations complemented the achievements of the Jain mathematicians on the subject and gave a method of finding the pressure value that is very similar to the modern "Pascal's Triangle".

In the 7th century, Brahmagupta did the important work of cataloging the fundamentals of algebra. In addition to listing the algebraic properties of zero, he also listed the algebraic properties of negative numbers. His work on the solution of quadratic indeterminate equations foreshadowed the work of Euler and Lagrange. Aryabhata's equations were explained in detail by Manjula in the 10th century and Bhaskaracharya in the 12th century. Bhaskaracharya derived the value of the derivative of the sine function. Later mathematicians used their unique

understanding of integration to calculate the area of curved planes and the volume enclosed by curved planes. This period also saw developments in applied mathematics – trigonometric tables and units of measurement were created. Yatibrishabha's Tiloyapannati, composed in the 6th century, gives various units for the measurement of time and distance, and also describes a system of measurement of infinite time.

By the end of the 12th century, the Muslim conquest of India had begun. With this began the decay of the Indian initiative in the positive sciences. The little originality that remained in India after the decline of the Mughal rule was suppressed by contact with western civilization. Thus India has been passing through a gloom for the last six centuries, from which it is now recovering and trying to make a new synthesis of its ancient civilization with the achievements of modern culture.

The Important Mathematical Applications of Ancient India:

Mathematics in India has its roots in Vedic literature which is about 4000 years old. 1000 BC and 1000 A.D. Various concepts of mathematics were given by Indian mathematicians. These included for the first time the concept of zero, techniques of algebra and algorithms, square roots, and cube roots. There are various examples of mathematics from ancient India which are applicable even today. If the Indian mathematician and astronomer Aryabhata had not been there, the number would not have been zero. Although people have always understood the concept of being nothing or being nothing. A comparatively new concept, it was fully developed in India around the fifth century. Before this, mathematicians had struggled to perform even the simplest arithmetical calculations. Today, zero both as a symbol (or number) and as a concept means the absence of any quantity. Zero allows us to navigate, perform complex equations, and invent computers. "Zero is widely seen as one of the greatest innovations in human history, a cornerstone of modern mathematics and physics," said Peter Gobets, secretary of the ZeroGrindia Foundation or Zero Project. In ancient India, traditional mathematics called ganitam was known before the development of algebra, it originated from the name bijaganitam, which was given to the

algebraic form of calculation. Ka means second and Ganitam means.

Around the 5th century in India, a system of mathematics simplified sagotic calculations. At that time its application was limited to astronomy because its forerunners were astronomers. Since astronomical calculations are complex and involve many variables that go into the derivation of unknown quantities. Algebra is a trivial method of calculation and by this attribute, it scores higher than traditional arithmetic. Trigonometry originated in ancient India. It traveled from India to the Middle East and was adopted by people everywhere. From here it was conveyed to Europe through the Arabs and went through several modifications to reach its present form. Trigonometry was considered a portion of astronomy in ancient times. Historians consider Aryabhata, Brahmagupta, Bhaskara, and Bhaskara 11 as the main exponents of trigonometry, Bhaskara. 1 gave formulas to find the values of the sine function for angles greater than 900 (Aust's angle), on the other hand, Bhaskara 11 gave exact expressions to calculate the trigonometric ratios of acute angles such as 180, 360, 540, and 20 Gave.

In the classical period of Indian mathematics (400 CE to 1600 CE), significant contributions were made by scholars such as Aryabhata, Brahmagupta, Mahavira, Bhaskara 11, Madhava of Sangamgram, and Nilakantha Somayaji. The decimal number system in use around the world today was first recorded in Indian mathematics. It was in the 7th century CE when Brahmagupta found the first general formula for solving quadratic equations, the decimal system (or Hindu number system), which was the forerunner of the Arabic numerical system, originated in India and developed between the 6th century CE Had happened. The Fibonacci sequence is a series of numbers where a number is found by adding two numbers before it, starting at 0 and going through 0, 1, 2, 3, 5, 8, 13, 21, 34, and so on. It was first described by Virhanka, Gopat, and Hemchandra as an outbreak in the earlier writings of Pingala. Made of ivory, the rulers found during excavations revealed amazing precision of decimal subdivisions on it. The people of the Indus civilization realized great accuracy in measuring mass, length, and time. He was among the first to

develop a system of uniform weights and measures. A comparison of the available items indicates a large scale of variation across the Indus regions. Their smallest division, marked on the scale from ivory found at Lothal in Gujarat, was about 1.704 mm, the smallest division ever recorded on the Bronze Age scale. The history of measurement systems in India begins in the early Indus Valley Civilization, which survives samples dating to the 5th millennium BCE. The adoption of standard weights and measures from early times is visible in the country's architectural, folk, and metallurgical artifacts. A complex system of weights and measures was adopted by the Mauryan Empire (322–185 BCE), which also made rules for the use of this system. Later, the Mughal Empire (1526–1857) used standard measures to determine land holdings and collect land tax as part of the Mughal land reforms. A total of 558 weights were excavated from Mohenjodaro, Harappa, and Chanhu-daro, not including the defective weights they found no statistically significant difference between weights that were excavated from five different layers. The depth of each was about 1.5 meters. This was indication that strong control existed for at least 500 years. A weight of 13.7 g is one of the units used in the Indus Valley. The notation was based on the binary and decimal systems. 83% of the weights of the diggers from the above three cities were cubic and 68% were made of rags.

Indian mathematicians also contributed to the field of geometry. There was a field of mathematical applications called Rekha Ganita (line calculation). The Sulva Sutras, which means 'the rule of law', gives geometrical methods for building altars and temples. The layout of the temples was called Mandala. Some important works in this area have been done by Apastamba, Bodhayana, Hiranyakeshin, Varaha, and Vadhula. Mathematicians from Kerala devised rules for second-order interpolation to calculate intermediate sine values. Madhava, a mathematician from Kerala, may have discovered the sine and cosine series about three hundred years before Newton. In this sense, we can consider Madhava as the founder of mathematical analysis. Madhava (circa 1340 - 1425 A.D.) was the first to take decisive steps in the treatment of its boundary-transcendence from finite

processes to infinity of ancient Indian mathematics.

Binary numbers were discovered in the West by the German mathematician Gottfried Leibniz in 1695. However, new evidence proves that binary numbers were used in India before the 2nd century, more than 1500 years before their discovery in the West. The source of this discovery is a text on music by Pingala titled "Chhandasastra" which means the science of meter. This text falls under the category of "sutras" or aphoristic sayings. A detailed discussion of these brief but profound statements is to be found in later comments. The descent of "Chhandshastra" has been done in the second century.

Conclusion:

Many mathematical concepts emerged in India, such as the number system, decimal system, and the use of zero, square root, and cube root. Brick construction and vertical intersection of roads in the Indus Valley Civilization, the Monolithic Pillars of Ashoka, and the Shulbasutras (the concept of acute and obtuse angles) show extensive knowledge of measurement and geometry. ' (Indian numeral), which is currently known as Arabic. It was used in the inscriptions of Ashoka. The concept of zero has its basis in the Indian philosophical concept called 'Shunya'. Aryabhata calculated the area of a triangle. As a result of which trigonometry was born. Seeing the genius of ancient Indian mathematicians for the use of mathematics in ancient Indian art, let us wake up our dormant talent and bring it to the fore, to join India as a leading country before the world. Contribute to it. Some of the other such mathematicians have been born in India in modern times and spread India's identity like the light of a firefly. the way we use the same identity We have to make it, only then the usefulness and significance of mathematics will be possible for us. Today's youth, carrying forward the tradition developed by our ancient Indian mathematicians, should try to establish mathematics back in the same place in India. By remembering the use of mathematics in ancient Indian art, knowing, understanding, and developing in mathematics, get the same pride.

Reference:

1. Morris Kline, *Mathematical Thought from Ancient to Modern Times*, Volume 2, OUP USA; Revised ed. Edition (1999)
2. Morris Kline, *Mathematical Thought from Ancient to Modern Times*, Volume 1, OUP USA; Illustrated edition (1990)
3. T.A. Sarasvati Amma, *Geometry in Ancient and Medieval India*, Motilal Banarsidass,; 2nd Edition (2017)
4. T.S. Bhanumurthy, *A Modern Introduction To Ancient Indian Mathematics*, New Age International Private Limited (2008)
5. Runu Dhar, Debadatta Adak, *New Thoughts on Ancient and Modern Mathematics*, EBH Publishers India; 1st Edition (2021)
6. <http://hinduonline.co/DigitalLibrary/SmallBooks/HinduMathematics2Eng.pdf>
7. <https://www.davidhbailey.com/dhbtalks/dhb-india-2017.pdf>
8. <https://publications.azimpremjiuniversity.edu.in/600/1/Ancient%20India%20and%20Mathematics2010IssueXIV.pdf>
9. <https://www.encyclopedia.com/science/encyclopedias-almanacs-transcripts-and-maps/mathematics-medieval-india>
10. <https://math.illinoisstate.edu/schebol/teaching/320-10-files/Amartya.pdf>
11. <http://ancientindianwisdom.com/contribution-to-science-overview/contributions-to-science/development-in-mathematics>
12. <https://gonitsora.com/a-brief-history-of-ancient-indian-mathematics-part-i/>
13. <https://www.cerc.utexas.edu/~jay/anc.html>
14. https://www.tifr.res.in/~archaeo/FOP/FoP%20papers/ancmathsources_Dani.pdf
15. https://www.isical.ac.in/~amartya/overview_motherindia.pdf
16. <https://www.igntu.ac.in/eContent/IGNTU-eContent-378558069426-BA-AIHC-6-DrJanardhanaB-ScienceandTechnologyinAncientIndia-3.pdf>
17. https://www.mathunion.org/fileadmin/IMU/ICM2010/offline/www.icm2010.in/wp-content/icmfiles/uploads/JLNehru_final.pdf
18. https://namami.gov.in/sites/default/files/book_pdf/History%20and%20Development%20of%20Mathematics%20in%20India.pdf
19. <https://www.historydiscussion.net/history-of-india/contribution-of-ancient-india-towards-science-and-mathematics/2267>

Aspects of Diaspora Reflected in the Writings of Jhumpa Lahiri and Rohinton Mistry: An Overview

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DOI- 10.5281/zenodo.7431336

Abstract

In the present paper attempts will be made to define the term 'Diaspora', etymology of the term Diaspora, a very brief history of the word diaspora and its reflection in the select works of Jhumpa Lahiri and Rohinton Mistry.

The word "diaspora" is being used very extensively in many of the fields including journalistic writing, political and academic discourses taking the themes of migration and cultural, emotional and other walks of life of the immigrated people from one country to the other. 'In the twentieth century, the meaning of the term gradually expanded to cover the involuntary dispersal of other populations, especially Armenians and people of African descent since the 1980s diaspora has proliferated to a remarkable extent, to the point where it is now applied to migrants of almost every kind'(Kevin,1). In the beginning, it would be used in the context of Jew dispersal and exile, but later it very commonly used in other fields. The Greek noun *diaspora* derives from the verb *diaspeirein* a compound of "dia"(over or through) and "speirein" (to scatter or sow) The word emerged from the proto-Indo- European root *spr* , which can be found today in such English words as "spere", "sperm", "spread" and "disperse". In all of its various uses, diaspora has something to do with scattering and dispersal. To the ancient Greeks, diaspora seems to have signified mainly a process of destruction. (2) However, diaspora and the Jewish History have a very close connection. Later, the term diaspora was connected theology. The Jews, according to the Bible disobeyed God's law, therefore, as a punishment they were exiled and their only hope was 'repentance'.

Introduction-

As far as the extraordinary proliferation of the term 'diaspora' is concerned, it extended its wings in the academic domain since the 1980s covering all sorts of immigration. However, historical development is also responsible for its spread. Novel technological as well as communicational means could provide impetus to the international immigration in the recent past. The field of diaspora studies now has its own special centres and journals. Khachig To'lo'lyan, a Syrian-born professor of English at Wesleyan University, whose Armenian parents moved to the United States by way of Syria, Lebanon, and Egypt, has edited *Diaspora: Studies*, published in New Delhi, focuses on Indian migration, while *South Asian Diaspora* based in the United Kingdom, covers migration from and within the subcontinent (10). The widespread of the term 'diaspora' shows very patently that something has been stored in the minds and that began to come out in terms of writing.

Defining 'diaspora' seems to be very difficult and inconsistent as the term embraces many elements of society. Jewish captivity, African Slavery, Armenian genocide and the Irish famine, etc cannot be

counted as a one single entity; rather many elements are involved into it. Migration of merchants, workers, and colonizers cannot be considered as a one single purpose. As a result of this a coherent definition of the term 'diaspora' seems impossible; however, some criteria can be clubbed together and can be defined. Again, the problem remains unresolved as which of the criteria are fit and which are unfit for the term. One more thing has to be noted here that the word 'diaspora' has become a synonym for population movements in general, not just compulsory migration. Thus, a single and well knit definition of the term diaspora is simply not feasible.

Jhumpa Lahiri

Jhumpa Lahiri wrote some novels and collections of short stories bringing into them diasporic elements in them. Her debut and Pulitzer Prize winning short collection *Interpreter of Maladies* narrates the intensity of diasporic emotions in terms of diverse characters portrayed in the stories. She brought out the post-colonial and post-modern impact on the lives of immigrants with the help of her writings. Jhumpa Lahiri, being an American writer, brought to light American experiences of Indians and Indian experiences to an American. Her story "A

Temporary Matter” narrates the life of an Indian couple in a foreign land. The protagonists of the story suffer manage the familial bondage. The protagonist of the story Shoba has been portrayed as an individual having her self- identity. She is an example of a modern woman having the capabilities of self- decision. The protagonist Shukumar expresses and shows his respect for Shoba’s nature, however, gradual detachment is found between the couple taking Shoba’s self-reliant nature. The death of their new born baby brought a kind of chasm in their relations and began to lead a life of seclusion from each other. At the end of the story it has been found that immigrant life could become a obstacle in cordial relationship even in the country like India.

Her stories like, “When Mr Pirzada Came to Dine”, “A Real Durwan”, “The Treatment of Bibi Haldar”, etc revolves around the daisporic elements showing alienation and detachment. All in all, the stories of Jhumpa Lahiri have been considered to be the scrutiny of various dimensions of diaspora commencing from the inner self to the outer circle. Her stories, besides analyzing this factor, they also focus on the diaspora of time and community.

Rohinton Mistry

Rohinton Mistry, an Indian born Canadian writer is a recipient of many prestigious awards including Neustadt International Prize for Literature in 2012. He wrote books such as- *A Fine Balance*, *Such a Long Journey*, *Family Matters*, *Tale from Firozsha Baag*, *Swimming Lessons* and *The Scream* etc.

Rohinton Mistry expressed his views pertaining to the clash between the old culture of India and the new culture of Canada in terms of his writings. One can find his intention about description of trans-cultural space in his novels. Home land and host land conflict is being observed through

his fictional work. His novels *Such a Long Journey* and *A Fine Balance* are the excellent examples of diaspora writing. The novel *Such a Long Journey* brings out the historical events as its setting and background, and the inward journey of the major characters, residing in the Khodabad building. In this novel the writer employs images and symbols more decisively for the reconstruction of past memories.

A Fine Balance brings out a number of paradoxical situations, where the reader is emotionally moved by. In the novel the writer very keenly depicts the history with invincibility of human mind. The characters retain a collective memory, vision and myth of their marginalized group – its trauma, suffering and struggle collectively share the efforts of balancing their lives in their different specific way.

To conclude, Jhumpa Lahiri and Rohinton Mistry very patently and minutely portrayed the aspects of diaspora in terms of their writings. Self- alienation, loss of identity, quest for identity, cultural mutation, familial detachment, etc is the central and integral part of their writing. I could not extensively deal with the characterization and themes of every individual work due to space constraints.

Works Cited

- 1) Dodiya, Jaydipsinh. *The Fiction of Rohinton Mistry: Critical Studies* New Delhi: Prestige Books, 1998.
- 2) Kenny, Kevin. *Diaspora A Very Short Introduction*, Oxford University Press, New York, 2013 p 1
- 3) ----- p. 2
- 4) -----p. 10
- 5) Lahiri, Jhumpa. “Interpreter of Maladies”. Harper Collins Publisher, 1999, UK

Issues and Challenges Faced By Organic Farming with Special Reference to Certified Organic Inputs in Maharashtra

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DOI- [10.5281/zenodo.7431356](https://doi.org/10.5281/zenodo.7431356)

Abstract:

The Government's agricultural policy seeks to enable technically sound, economically viable and socially acceptable use of natural resources for organic agriculture. The policy will bring potential area for organic farming, sustainability in soil water conservation, strengthening rural economy and bringing value addition to organic produce through fair pricing and organized marketing system. To facilitate organic farming, 12 state governments (Kerala, Karnataka, Andhra Pradesh, Sikkim, Mizoram, Nagaland, Himachal Pradesh, Madhya Pradesh, Gujarat, Rajasthan and Odisha) have come out with their own State Organic Farming Policies, and Sikkim became the first state to be declared an organic state. To increase the farmer income and improve the productivity of the farms, government has initiated a systematic approach towards promotion of Organic farming. The supply of certified organic inputs is an important link in the development of sustainable farming. Most of the governments in the world are emphasizing on promotion of organic farming.

Keywords: Organic Farming, eco-friendly, Urbanization, Certification, APEDA, FSSAI, NPOP.

Introduction:

The system of Indian agriculture, based on the traditional knowledge and practices handed down from generation to generation, could not produce enough to feed the increasing population. The disrepute of our dependence for food on the western developed nations and the politics of food aid practiced by them added to our determination to be self-sufficiency in food production by modernizing agriculture. Organic farming has several advantages over the conventional one apart from the protection of both the environment and human health. Improved soil fertility, better water quality, prevention of soil erosion, generation of rural employment, etc. are some of them. A study is necessary and hence the present study is conducted with following specific objectives.

Objectives of research:

- Awareness creation about certified organic products is recommended to improve the market for organic produce and assurance of minimum premium price for organic produce.
- Promote Governmental aid and planning for certified organic farming.

Benefits of organic products: The consumers are increasingly becoming aware of the food safety issues and environmental issues because of their increased concern about health, the environment's health and its global implications. The benefits of organic products are summarized below:

a. Health: Organic agriculture regulates how food is grown and processed. In addition to meeting the health and safety requirements of conventional food, organic food must also meet the additional safety standards of organic farming such as tougher regulations on manure use and disease control.

b. Environment: Organic farming primarily focuses on eco-friendly agriculture practices. It might not eliminate the negative environmental impacts wholly, but it can help reduce water pollution and improve the soil quality.

c. Economics: Certified organic foods fetch higher prices, in comparison to conventional foods as most of the organic produce is directly procured by companies thereby excluding the middlemen. The retail price of organic food is high and eventually, organic production reduces cost also. This provides farmers a good return on an organized supply chain system.

Key growth drivers of organic cultivation and markets in India:

a. Increasing health awareness: In recent years, there has been an increase in health concerns among Indian consumers. They have started giving importance to the nutrient content and the quality of the food they eat, thereby resulting in an increase in the consumption of organic food.

b. Increasing support from Government of India: The Government of India is promoting organic farming and the consumption of organic food in the country.

Financial assistance is provided to farmers who are adopting organic farming under various central sector schemes such as National Mission for Sustainable Agriculture (NMSA), Mission for Integrated Development of Horticulture (MIDH), National Food Security Mission (NFSM) and Rashtriya Krishi Vikas Yojana (RKVY).

Challenges in the organic Sector in India:

Some of the challenges faced by the organic sector today can be grouped into three heads:

a. Producer-level challenges:

- **Certification process:** Issues like high certification costs, lengthy procedures, international validity, inadequate certifying agencies and inadequate supporting infrastructure facilities for verification are rampant in the certification process for pursuing organic farming. It is expensive for many small groups of farmers or individual farmers.

- **Certification standards:** There is also a gap in the understanding of the certification standards and labelling requirements.

- **Lack of standardization for the certification of different commodities:** Dairy products have a different standard while meat has a different standard. The process of standardization of organic coconut will be different from that of the value-added products of coconut. Therefore, a company having multiple commodities needs to obtain multiple certifications and maintain multiple records as per the applicable standards.

- **Lack of incentives for farmers:** The transition from conventional to organic farming is accompanied by high input costs and low yields in the initial years. The cost of going completely organic is quite high, due to the high cost of organic manure. The commercially available bio-manure products may not be completely organic, and therefore the products sometimes get disqualified at the certification stage.

b. Processor-level challenges:

- **Supply chain issues:** Many farmers are apprehensive of organic farming since it involves high production costs. The emphasis on collection, transportation and storage of fresh organic produce is very high. Due to relatively low volumes, the marketing and distribution chain of organic food products is relatively inefficient and the costs involved are very high.

- **Lack of proper branding and packaging:** Promotion and sale of organic products require separate packing material that is natural and requires distinctive branding that distinguishes organic from conventional products. At present, there is an absence of regulations on labelling standards. There is also lack of standards and clarifications regarding labelling and certification requirements for the domestic market and import market leading to malpractices such as mixing organic with conventional produce. The Indian certification agency plays an important role in branding. Since it requires financial assistance, the Government and private sector should come to a common understanding of organized export, brand development, and promotion with incentives from the Government.

c. Consumer-level challenges

- **Lack of awareness among consumers:** Many consumers in India are still unaware of the health benefits of organic food products. The situation is worse in non-metro cities where consumers do not know the difference between conventional farming and organic farming. They are buying products labelled as natural assuming them to be organic.

- **The high cost of organic food products:** The cost of organic food products in India is currently higher than that of conventional food items. Specialized farmer training cost, processing and inventory holding cost (without chemical additives), and increased packaging, logistics, and distribution cost (due to low volumes), contribute to the high price of organic food products.

Regulatory environment and government initiatives to address some of the challenges and increase competitiveness in the organic Sector:

- a. Agricultural and Processed Food Products Export Development Authority (APEDA) for implementing the National Programme on Organic Production (NPOP)

- b. National Centre for Organic Farming (NCOF) for implementing the Participatory Guarantee System in India

- c. Food Safety and Standards Authority of India (FSSAI) for regulation of food safety standards of organic packaged food and beverages products.

Solutions for improving the logistics and awareness of genuine organic products.:

- Adequate research and extension support needs to be provided for improving the region -specific farming techniques and disseminating the findings for conversion and management of organic farms in farming-system mode.
- Central and state governments should acknowledge organic agriculture as an effective mechanism to reduce greenhouse gases and sequester soil carbon.
- The governments should recognize organic agriculture in Kyoto-Protocol carbon - credit mechanisms.
- Organic market development sector needs major thrust on development of supply chains and related infrastructure to ensure competitive price of organic produce to the grower in domestic and international markets.
- Government support is required for cheaper access to organic certification of farms.
- Consumer awareness programs through consumer awareness initiatives on organic labelling from the government like jago grahak jago need to be undertaken for a healthier country.

Conclusion:

Year on year the cost as well as dependency of the farmers on these external inputs kept on rising. Even the pharmaceutical and cosmetic companies that consume agricultural produce or derivatives in their products are now increasingly demanding residue analysis and the farm practices being followed that are tougher than the government regulations. The conventional farming practices are using non-renewable resources and the chemicals are polluting and destroying the ecosystem. Most of the followers of conventional farming practices also accept the point that conventional farming is causing heavy harm to the land and human health. The main point they promote to justify conventional farming was its high produce. I will end the report on a note saying “We are what we eat, Food itself should be the medicine”

References:

1. Kapadnis V.B,2021, '*An Analytical Study of Issues and Challenges Faced by Organic Farming with Special Reference*

to Certified Organic Inputs in Mumbai and North Maharashtra', PhD Thesis, Savitribai Phule Pune University, Pune.

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DOI- 10.5281/zenodo.7437099

Abstract

A set of effective human resource management practices can influence company performance and help the company in achieving a sustainable competitive advantage. The Life Insurance Corporation of India (LIC), established in 1956, is among the world's largest life insurers. With magnificent performance, at enormous scale, LIC dwarfs the other 23 life insurance players in India. LIC is fully owned by the Indian government; and given the popular perception that privately-managed organizations perform better, LIC's sustained success and dominating growth is intriguing. LIC of India has been imparting Training and Development Programs to their employees from time to time. The present study reveals that, Induction Training conducted by LIC of India for their employees are organized in a very systematic and orderly manner.

Keywords: Organizational Development, Career Development, Employee Orientation, Skill and Technical Training, Management Training

Introduction

In the present day society, the need for well developed and qualified human resources is being felt profoundly by the LIC, functioning in a scenario characterized by global competition, innovative and newer wide variety of goods and services and ever changing technology; all giving rise to human resource development. In order to meet the challenges; the employees of the LIC became focal point. For, the traditional employees needed to be properly developed so as to handle new technology, to manage new risks attached, to cope up with wider markets and to incorporate professional touch. In this backdrop, the researcher undertook a study of HRD in LIC and their impact on employee's productivity. There was a time when personnel manager was expected to manage employees to achieve eventually the overall goals of the organization. But, of late, the practicing personnel manager could perceive wider scope of managing the employees with the basic approach 'enlightened self interest' - a two way traffic to manage employees not only for the benefit of the corporation but also for the benefit of employees too. HRD is being practiced as a dynamic and creative means to achieve increased productivity and profitability, improved morale and career development of employees, better industrial relations, etc., to achieve the overall goals of the corporation.

Objection of the Study

1. To study the Human Resource Development Procedure in Life Insurance Corporation of India.
2. To study the process of training of employee in the corporation.
3. To study the system of Training and development of employee in the corporation

Research Methodology

The study is based on secondary data collected from annual reports of corporation, IRDA and other agencies as per the requirement. The data also collected from books, research paper and articles. The suitable and required statistical tools are used to summarizing the data.

Human Resource Development Policies of LIC

When Life Insurance Contract is completed between the insurer and the insured, a policy is issued to the insured by the insurer which contains all the terms and conditions of the contract. There are large number of Life Insurance Policies and in view of this Life Insurance Corporation of India issue a printed policy form for each major plan of insurance which contains all the details about the plan such as sum assured, premium amount to be paid during the year, mode of payment, name and address of the life assured etc. The policy document is divided in to following sections: •

Preamble; Operative Clause; Provision; Schedule; Attestation and Privileges and conditions.

There are three types of training centers with defined functions.

1. Management Development Centre (MDC):

- a. Management programmes and special seminars/ workshops.
- b. Training of trainers programme.
- c. Functional programmes.

2. Zonal Training Centre (ZTC):

There are eight zonal training centers to impart training in:

- a. Courses on General Management
- b. Courses on Supervision
- c. Functional Training
- d. Sales Training
- e. Seminars on special subject
- f. Staff training.

3. Sales Training Centres (STC):

There are 2s STCs, and they are spread widely so as there are three/four STCs for each zone depending on the need and impart training in:-

- a. Assistant Administrative Officers training
- b. Development officer's training
- c. club members other than chairman & zonal members
- d. Selected top agents training

For the above training necessary administrative arrangements like faculty support, teaching aids are provided by the zonal office.

Importance and Objectives of Training in LIC

One of the objectives of the Corporation is to involve all the people working in the Corporation to the best of their ability in furthering the interest of the insuring public to provide efficient service with courtesy. Training inter- alia is an essential support to achieve this objective. Training contributes in keeping people dynamic and provides an opportunity to employees to develop better understanding of what they do apart from enhancing their capability individually.

1. To acquire knowledge and skills necessary for the job, by understanding why the job is performed and how it can be improved.

2. To acquire necessary supervisory managerial skills in areas of decision making, problem solving, role clarity and role performance, interpersonal relationship etc.

3. Training is seen as an important factor for managing change and achieve excellence.

4. To develop internal faculty support on all areas, by a systematic faculty development.

5. To identify the training needs of the entire personnel in consultation with operating managers.

6. To dovetail training to the career planning and personnel in the industry.

Training Structure in LIC of India

There are three types of training centres with defined functions.

1. Management Development Centre (MDC): This is for imparting knowledge in:-

- a. Management programmes and special seminars/ workshops.
- b. Training of trainers programme.
- c. Functional programmes.

2. Zonal Training Centre (ZTC): There are seven zonal training centres to impart training in:-

- a. Courses on General Management
- b. Courses on Supervision
- c. Functional Training
- d. Sales Training
- e. Seminars on special subject
- f. Staff training.

3. Sales Training Centres (STC): There are 25 STCs, and they are spread widely so as there are three/four STCs for each zone depending on the need and impart training in :-

- a. Assistant Administrative Officers training
- b. Development officer's training
- c. Club members other than chairman & zonal members
- d. Selected top agents training

For the above training necessary administrative arrangements like faculty support, teaching aids are provided by the zonal office.

Approaches of Training

- Training needs survey
- Competence analysis
- Performance analysis

- Task analysis or group dynamism analysis

- Feedback recommendations
- Management decisions.

Criteria for Selecting Trainees

- The size and population of the employees
- Time available
- Client training commitment
- Type of programme to be taken up
- Level of trainees
- Resources available in house and outside
- Budget allowed
- Cost effectiveness criteria

Benefits of training to the organization

- Investment in training will have a focus and direction
- Performance problem will be solved leading to performance level
- Enhanced knowledge/skills
- Changed attitude
- Adaptability to new methods and technology
- Reduce time lags
- Reduce wastage, costs, frictions/conflicts
- Improve quality - cheaper than self-learning

Details of the training activities for Administrative Personnel Trained is as follows:

Sr. No.	Training Institute	No. Trained	
		2020-21	2021-22
1	Management Development Centre, Mumbai	8, 423	3, 779
2	Zonal Training Centre	43,235	63, 111
3	Divisional/Employee Training Center	9, 711	31, 564
4	National Insurance Academy, Pune	3, 584	2, 339
5	(Open programs) by Central Office	394	395
6	External Training (Customized programs) by Central Office	48	232
7	External Training by the Zonal HRD Department	679	1, 095
8	Total Administrative Staff Trained	66,074	1, 02, 515
9	Workshop on IRDAI Regulations	8, 218	22, 932

Source: 65th LIC Annual Report 2022

In order to provide new insight and perspectives to our Officials regarding emerging trends and innovations across the globe and to imbibe the best practices in various areas of operations, they are nominated to various external training Programs of relevance through External Training Institutes i.e. National Insurance Academy, Pune, Institute of Actuaries, College of Insurance, Indian Institute of Management, National Institute of Bank Management, Indian Chamber of Commerce, Administrative Staff College of India, Confederation of Indian Industry, ASCI, Hyderabad, etc. Further, in view to cover large number of employees, during the year 2021-22, various short duration Webinars have been conducted on topics viz; Digital Innovations, Cyber Securities, Product Mix and Channel Mix of Life Insurance Business across companies, Concept of

Mortality Tables, Global Underwriting Practices.

Conclusion

Training plays a very important role in the success of any organization because directly or indirectly it affects the performance of the employees. Through training opportunities, workers can develop and maintain skills that are required for employment in a continually changing workplace. By providing training, employers support the skill development of their employees. If the training is good than the employees will contribute their maximum for the achievement of the organizational objectives.

In the insurance, employee's behavior plays a vital role in improving the productivity of an organization. By incorporating personality development programmes such as role play, group discussion and business games the

superior and subordinate relationship can be strengthened. Corporation should take necessary steps in such a way that employees should feel training is essential to enhance the productivity and customer satisfaction to meet the present challenges in India.

References:

1. **Trilochan Sharma (2015)** Human Resource Development in LIC of India International Journal of Trade & Commerce, January-June 2015, Volume 4, No. 1
2. **Sujithra. K. V. (2019)** A Study On Perception And Satisfaction Of LIC Policy Holders With Special Reference To Ernakulam District, EPRA International Journal of Multidisciplinary Research, Volume: 5, Issue:9, September 2019
3. **Dolly Dolai (2011)** HR Practices and Competitive Strategies: The Case of LIC of India Srusti Management Review Vol.- IV, Issue-I, Jan-2011
4. **Kumud and R. N. Jha (2019)** A Study on Recruitment and Selection Practices in Certain Life Insurance Companies International Journal of Science and Research (IJSR) Volume 8 Issue 6, June 2019
5. **Philip Mody and Odang Tayen (2020)** Training and Development in LIC of India with Special Reference to Pasighat, Naharlagun and Itanagar Branches of Arunachal Pradesh, India GInternational Journal of Humanities and Social Science Invention Volume 9 Issue1 Jan, 2020
6. **Odang Tayeng and Philip Mody (2020)** Impact of Promotion on Employees Performance of LIC of India with Special Reference to Pasighat, Naharlagun and Itanagar Branches, East African Scholars Journal of Economics, Business and Management Volume-3, Issue-1, Jan-2020
7. **Philip Mody and Odang Tayeng (2020)** Recruitment and Selection in LIC of India: A Study of Itanagar, Naharlagun and Pasighat Branches, India East African Scholars Journal of Economics, Business and Management Volume-3, Issue-1, Jan-2020
8. **S. K..Irshad and T.Priyanka (2013)** A Study on Job Satisfaction with Reference with Life Insurance, International Journal of Computer & Organization Trends –Volume 3 Issue 5 September to October 2013
9. LIC Annual Report

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